DOCUMENT RESUME

ED 256 715 SP 025 817

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TITLE Curriculum Implementation: A Framework for Action.
INSTITUTION Ontario Public School Teachers' Federation, Toronto.
PUB DATE 84
NOTE 70p.; For related document, see ED 220 455.
PUB TYPE Guides - Non-Classroom Use (055) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Curriculum Development; *Curriculum Problems; Educational Resources; Foreign Countries; Information Networks; Interschool Communication; *Program Implementation; Resource Allocation; Role Perception; Time Management
IDENTIFIERS Canada

ABSTRACT

This sequel to the study, "New Perspectives on Curriculum Implementation" (1981), was designed to ensure that curriculum planners have ready access to concrete planning strategies for effective curriculum implementation at the local level. In the first section, a review of the literature offers users' and organizations' perspectives on the complexity and problems of curriculum development. Survey procedures are briefly described, and data concerning teachers', principals', and consultant/coordinators' opinions about curriculum implementation problems are summarized. Recommendations, based on these problems, are presented. In the second section, an analysis is presented of the five major barriers--communication, role clarification, time, resource support, and information acquisition--to curriculum implementation that were identified in the orginal study. Suggestions for overcoming these barriers are described. The final section offers a case study applying the principles outlined in the previous sections. (JD)

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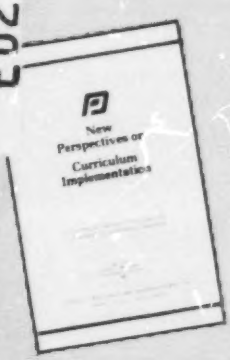

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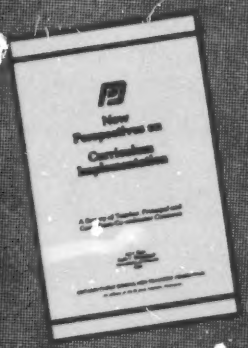

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3

TABLE OF CONTENTS

Foreword/ix
Preface/x

Section I: Barriers to Curriculum Implementation/1

A. Perspectives From the Literature/1
- The Curriculum/2
- The User/4
- The Organization/5
- Summary/7

B. Survey Procedures/7
- Instrument Development/7
- Sampling Procedures/9

C. Perspectives From the Field/11
- Teacher Data/11
- Principal Data/16
- Consultant/Co-ordinator Data/19
- Summary/23

D. Recommendations/26

Section II: Strategies for Curriculum Implementation/30

A. A Planning Model/30
- Assumptions/30
- Model/31

B. Communication/33
- Networks for Communication/33
- The What and Who of Communication/35
- The How of Communication/35
- Summary/37
- Checklist/38

C. Role Identification/39
Role Assignment/39
Feedback/40
Role Clarification/41
Summary/41
Checklist/42

D. Time/43
Time Wasters/43
Time Strategies/43
Time Scheduling/44
Time Awareness/44
Time Expectations/45
Summary/45
Checklist/46

E. Resource Support/47
Resource Planning/47
Resource Support/47
Resource Management/48
Summary/48
Checklist/49

F. Information/50
Guideline Information/50
Teaching Strategies/50
Resource Information/52
Summary/53
Checklist/53

Section III: A Case Study/54

A. Suggestions for Use/54

B. The Case Study/55

C. Curriculum Implementation Checklist/58

D. Conclusion/59

Bibliography/60

Tables

1/Returns by Subject Area/8
2/Types of Guidelines/10
3/Returns by School Board Size/10
4/Major Curriculum Implementation Barriers Identified by Teachers, Ranked in Order of Concern/14
5/Major Barriers to Curriculum Implementation Identified by Principals, Ranked in Order of Concern/18
6/Major Barriers to Curriculum Implementation Identified by Consultant/Co-ordinator, Ranked in Order of Concern/21
7/Major Barriers to Curriculum Implementation as Perceived by Three Groups/24

Figures

1/A Framework for the Discussion of Strategies Related to Curriculum Implementation/32
2/Common Communication Networks/34
3/Major Topics of Communication Throughout Stages of Implementation/35
4/Communication Patterns Throughout Implementation/36
5/Implementation Work Flow Chart/40
6/An Implementation Information Matrix/40
7/Resource Checklist/48
8/Foci for Information About the Guideline/50
9/Progressive Focus for Presentation of Information Related to the Nature of the Guideline/51
10/Flow of Information Throughout the Implementation Process/52

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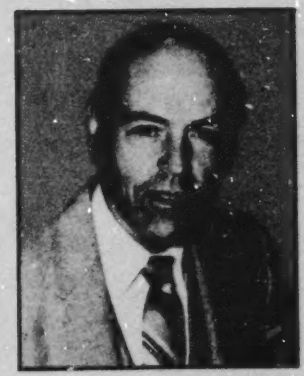

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FOREWORD

In September of 1981, this Federation published a study to aid in the identification of curriculum implementation concerns as perceived by educators in the Province of Ontario. Realizing that curriculum implementation is an on-going and dynamic process, the Ontario Public School Teachers' Federation commissioned this sequel to "New Perspectives on Curriculum Implementation." This sequel is designed to ensure that curriculum planners have ready access to concrete planning strategies for effective curriculum implementation at the local level. As such, it should prove equally helpful to teachers, those in positions of added responsibility, and the many other diverse audiences who are interested in the promotion of effective implementation practices.

This paper is in keeping with the OPSTF's long tradition of highlighting a broad range of effective alternatives in all aspects of the curriculum process. As a commissioned study, the interpretation of data, recommendations, and conclusions are those of the authors, and do not necessarily represent the OPSTF policy or position on curriculum implementation.

The Ontario Public School Teachers' Federation expresses gratitude and appreciation to the authors for the contribution they have rendered to the profession in the preparation of this practical and important research study on the implementation of curriculum in the schools of Ontario.

Mary Hill
President, OPSTF

PREFACE

There is an old story about a grasshopper who suffered each winter from severe pain in his legs due to the extreme cold. He tried every known remedy to no avail. In desperation, the grasshopper sought the advice of the wise old owl who lived nearby. The owl listened patiently to the grasshopper's complaints and after giving the matter serious consideration prescribed a straightforward solution. "Turn yourself into a cricket, and hibernate during the winter". The grasshopper was ecstatic and left, thanking the owl profusely for his wise advice. Upon his return home, the grasshopper reflected on the situation and wondered how this change might take place. Again, he sought the counsel of the owl who replied rather sharply, "Look, I gave you the solution. It's up to you to work out the process." Such is the case with curriculum implementation. For as long as curriculum guidelines have been written for schools, implementation of these guidelines has been the expectation. Programmes are planned, guidelines are written, and it is assumed that the adoption of a guideline guarantees its application in the classrooms of the province. Studies have proven otherwise. John Goodlad's classic book, *Behind the Classroom Door*, focuses attention on the discrepancy that exists between what is expected and what actually takes place in terms of curriculum implementation. Fullan and Pomfret, in 1977, demonstrated the importance of implementation as a phenomenon in its own right. They critically assessed research evidence in an attempt to determine the meaning of implementation and its potential determinants. More recently, Fullan addressed these same concerns in greater detail in his book, *The Meaning of Educational Change*. It can be concluded that implementation should be placed in the context of planned change. As such it must be viewed as a process rather than an event.

Curriculum guidelines are planned, developed and disseminated with the expectation that implementation will occur. This expectation is reasonable when one considers the cost in terms of the expertise, time and energy that have been expended in the development of curriculum guidelines in

the Province of Ontario during the last two decades. Research suggests that the process of implementation requires careful attention to myriad concerns; the identification of these concerns is necessary before strategies for overcoming the concerns can be determined.

The original study, entitled *New Perspectives on Curriculum Implementation* was commissioned to aid in the identification of curriculum implementation concerns as perceived by educators in Ontario who have responsibility for curriculum guideline implementation. As in the case of the grasshopper, the problems have been identified and implementation is the goal but people in the educational system have been left to work out the process for themselves. This revised text reviews the original study and then addresses the problem of process at the level of practice. Section I presents the highlights of the study commissioned by the Federation. Section II addresses the five major concerns identified in the original study by proposing an intervention model followed by a number of planning strategies for effective curriculum implementation at the local level. The text concludes with a case study and a check list for the assessment of individual implementation concerns.

SECTION I

Barriers to Curriculum Implementation

This section contains the highlights of the study reported in the booklet entitled *New Perspectives on Curriculum Implementation.* The recommendations based on an analysis of the data collected in that study suggest the need for action proposals in the area of curriculum implementation. Sections II and III of this booklet address that need by presenting strategies for practice.

A. PERSPECTIVES FROM THE LITERATURE

In recent years the Ministry of Education in Ontario has encouraged the translation of their curriculum documents for use in the schools of the province. Many boards have accepted this responsibility and have produced and disseminated a large number of curriculum guidelines representing many areas of study. Evidence has accrued that although these guidelines have been distributed, they are often not in use in schools. In other words, dissemination cannot be equated with implementation.

Implementation has been described as the putting to use of an innovation. In the Ontario context, curriculum implementation may be more narrowly defined as the act of putting of curriculum guidelines to use. It has become evident that curriculum implementation is not a single event, but rather a process involving a number of different but related components.

Much of what is known about the process of implementation has been learned through examination of the implementation of innovations. A new curriculum is an innovation. It may not require teachers to change a great deal from what they have been doing, but change in some form is required. What is known about successful and unsuccessful implementation of innovations may provide insight in determining how well curriculum guidelines are being implemented.

In examining curriculum implementation, three fundamental elements must be considered: the curriculum, the agents of implementation (teachers and administrators) and the receiving organization (usually a school or school system within which the curriculum will be used). Planning for implementation of curriculum guidelines would not be difficult if the three

elements could be considered in isolation. This is not the case, however, in the school setting. Each teacher brings to the curriculum both a set of expectations and a set of skills which influence the manner in which the guideline is utilized. The teacher also affects and is affected by the organization. The type of effect caused by interaction among the elements of implementation has been described as "mutual adaptation".

In such a dynamic process, problems arise and conflicts occur which inhibit actual implementation. A number of authors suggest that such conflicts and problems arise in reaction to obstacles or barriers, some of which may be identified prior to the onset of the implementation. If this is the case, and if the barriers are identified and accounted for in planning implementation, the likelihood of success should increase.

What are these barriers? How do they relate to the elements of implementation? From an extensive review of literature, it has been possible to identify many barriers which affect each curriculum implementation element. These are described in the following sections.

THE CURRICULUM

Inherent in the composition of the curriculum guidelines are a number of factors which increase or decrease the probability that the guideline will be implemented. Five general categories of these factors are apparent: complexity, explicitness, communicability, practicality and flexibility. Each will be described briefly.

Complexity is a term which can be used to represent both the amount of change the implementation of a guideline demands, and how many people are, or how much of the organization is directly or indirectly affected by its implementation. As an example, the change from a lecture-question approach to a self-directed learning approach requires considerable change in teacher-student behaviours. The fact that the self-directed learning approach may encourage free movement of students throughout the school building not only affects the classroom teacher directly responsible for the students involved, but indirectly affects the entire school. It may require that all teachers in the school be involved in understanding why the change has been made and why it is advantageous.

The second factor related to the guideline which affects its implementation is its explicitness. Explicitness refers to the clarity of the innovation. In one sense explicitness is related to complexity — the more complex the guideline, the less likely it is to be explicit. In several studies of curriculum implementation it has been discovered that the goals and specific objectives of new guidelines were not really understood by teachers expected to use them. This was frequently due to the absence of a clearly stated rationale and philosophical statement.

Communicability, a third characteristic of guidelines upon which attention must be focused if implementation is to occur, is closely related

to explicitness. Communicability of a guideline refers both to the style in which it is written and to the physical makeup of the document. The guideline must be attractive and clearly understandable

Teacher decisions to use a guideline are often related to a fourth factor, practicality. Developers may believe a particular innovation is compatible with existing practices and advocate its use, only to find that teachers perceive the product to be incompatible with prevailing practice. If a guideline is not obviously practical, it is unlikely to be implemented.

A fifth characteristic of a guideline which determines if it will be implemented is its adaptability or flexibility. A guideline which can easily be adapted by a teacher to work in a particular situation will be more likely to be implemented than a guideline that is rigid and allows little opportunity for teachers to practise discretion in the utilization of materials and methodologies.

Underlying all five characteristics of a guideline which foster or inhibit its implementation is the assumption that the new guideline is relatively advantageous. Its complexity, communicability, explicitness, practicality and adaptability should make its relative advantage obvious.

In summary, five potential sources of barriers to implementation can be found within the guideline itself. Each of these gives rise to specific questions which might be asked relative to their being potential barriers to implementation. They are:

Complexity

How extensive is the change?

Explicitness

Is there a rationale?
Is the philosophy apparent?
Are goals and objectives specified?

Communicability

Is it well organized?
Is it attractively put together?

Practicality

Are expectations for students realistic?
Are there suggestions for student evaluation?
Are there aids for planning instruction?
Is there adequate reference to resource materials?
Is the expectation for teachers to cover material realistic?
Are the other expectations for teachers realistic?

Adaptability

Is the guideline flexible enough to be used in conjunction with existing materials?

THE USER

Most curriculum guidelines are written with teachers in mind. They are meant to be used either to help the teacher bolster existing programmes, or to suggest and support alternate approaches and materials for instruction. The real change expected is at the classroom level. The teacher, then, must be considered of primary importance in the development of plans for implementation. If teachers are not committed to the change, it is unlikely to occur. The question of what will actually motivate and facilitate teacher action and approval for the new guidelines must be addressed in formulating curriculum implementation plans.

Many would argue that if teachers are to be committed to the implementation they must have a feeling of commitment to the guidelines. One of the more obvious ways in which this can be achieved is by teacher participation in guideline development and in the formulation of plans for their implementation.

Although an understanding of the implementation process is important it is equally significant for teachers to be knowledgeable about the behaviours, skills and attitudes necessary for the content and methods inherent in the new guideline. This necessitates careful examination of existing practices and those prescribed by the new guideline to identify the discrepancies between the two. These differences must be overcome through workshops and inservice programmes specifically designed to provide staff members with the skills and knowledge needed to implement the guideline.

In essence, the implementation of a new guideline requires a resocialization process. Even teachers who are committed to the change experience some change in their behaviour, and, therefore, change in their relationships with what is around them. Resocialization takes time and effort and the provision of inservice training opportunities. The more comfortable teachers feel with the new materials, the more probable it is that they will be effectively utilized and the more effective the implementation process will be.

Teacher commitment and teacher skill are not enough to guarantee that the guideline will be implemented. Teachers do not work in a vacuum; they require support and understanding from other parts of the organization if they are to implement the guidelines effectively. It is important that principals and consultants/co-ordinators share teachers' opinions and ideas related to such factors as clarity of objectives, availability of resources, time for planning and implementation skills. Collaborative planning appears to limit some barriers to implementation by promoting consensus and support. The organization must reward teachers with encouragement and extend obvious support for their attempts to implement.

The principal appears to have a special place in t

process. As a linkage person between the teacher and central office staff, the principal becomes a gatekeeper of change. If implementation is to be effective, the principals must know that they are important in the process. Knowledge of the guidelines being implemented makes it easier for them to exhibit commitment and support. Part of the principals' role is that of clarifying goals of the innovation, defining teacher responsibilities for planning the implementation, establishing communications networks, distributing resources and supervising and evaluating the implementation process in their school.

Consultants/co-ordinators have a similar responsibility to know the guideline and to exhibit commitment to its implementation. The consultant/co-ordinator holds a unique position in the organization to provide motivation and catalytic stimuli for principals and teachers.

In summary, three potential sources of barriers to implementation can be related to the users of the guideline. Each of these sources gives rise to specific questions which might be asked relative to these potential barriers. These are:

Attitude

Is the consultant/co-ordinator committed to the guideline?
Are principals committed to the guideline?
Are teachers committed to the guideline?

Knowledge

Have adequate time and opportunity been given to learn about the guideline before implementation was initiated?
Do consultants/co-ordinators know what the guideline demands?
Do principals know the guideline and how their teachers will have to change?
Do teachers have adequate knowledge to implement the guideline?
Has opportunity been provided for face-to-face discussion about implementation among teachers, principals and consultants/co-ordinators?

Skills

Do teachers, principals and consultants/co-ordinators have the skills necessary to implement the guideline?
Do teachers, principals and consultants/co-ordinators know what their role is in implementation?
Have adequate workshops and inservice programmes been provided to develop the knowledge and skills necessary for implementation?

THE ORGANIZATION

The implementation process has as its specific purpose the achievement of independent and successful use of a curriculum guideline. If

guidelines are to be implemented, there must be links between the organization of the school and the implementation process. The school organization is a critical variable for implementation.

Schools which work at establishing supportive relationships are more receptive to innovation than those which do not. In these schools, principals provide active support, teacher morale is high and central office personnel are supportive. The attitude of administrators directly influences the commitment of teachers to the implementation process.

A healthy organizational climate tends to foster implementation while an unhealthy organizational climate tends to inhibit it. Characteristics of healthy organizations include role clarity, flexibility, planned communication networks and commitment. Leaders in healthy organizations pay particular attention to the provision of knowledge and resources to personnel and to the means to motivate employees. The absence of any of these factors may impede implementation efforts.

Sources of potential barriers to the implementation of guidelines within the organization give rise to a number of questions to be considered in planning for implementation. These include:

Flexibility

Is the organization flexible enough to accommodate the guideline?
Has provision been made for adequate planning for implementation?

Role Clarity

Is the role in implementation of the personnel from central office clear?
Is the role of the principal in the implementation process clear?
Are the roles of teachers, principals and consultants/co-ordinators in developing the guideline co-operative ones?
Is provision made for co-operative planning for implementation among teachers, principals and consultants/co-ordinators?
Are procedures for implementation specific and clearly stated?

Communication

Are there adequate means of communication among the consultants/co-ordinators, principals and teachers related to the implementation of the guideline?
Are there adequate channels for feedback related to the effectiveness of the guideline during implementation?
Do administrative personnel have adequate knowledge about the probable effects of the guideline?

Commitment

Are principals, as a group, committed to the implementation of the guideline?

Are consultants/co-ordinators supportive of the change?
Do consultants/co-ordinators have high expectations related to the implementation of the guideline?
Do teachers and principals have high expectations for the implementation of the guideline?
Is there clear evidence of a positive attitude toward the guideline at all organizational levels?
Will principals support their teachers during the change?

Reward

Are there clear means for consultants/co-ordinators to motivate principals and teachers to implement?
Are there other means for principals to motivate teachers to implement?

SUMMARY

Implementation of a curriculum is a process. Three interactive elements have been identified as influencing this process: the curriculum, the user and the organization. Each element has components which may inhibit effective implementation if not considered in the planning for implementation.

The following pages describe the methodology employed in the development of instruments utilized in assessing the barriers to implementation perceived by teachers, principals, and consultants/co-ordinators. It also describes the population and sampling procedures employed in this study, together with demographic information about the respondents.

B. SURVEY PROCEDURES

The previous section of this report identified the major elements of the curriculum implementation process and a number of potential barriers to implementation associated with these elements. From these potential barriers, three questionnaires were developed to be utilized in providing insights into the perceptions of teachers, principals and consultants/co-ordinators related to specific barriers to implementation. Barriers to Implementation Questionnaire-A (BIQ-A) was designed for teacher responses, BIQ-B for principals, and BIQ-C for consultants/co-ordinators. A brief description of the questionnaires and method of their development follows.

INSTRUMENT DEVELOPMENT

The BIQ-A, B and C have similar formats although specific items differ in relation to the organizational position of the respondents. In each questionnaire, the respondents are asked to identify the specific curriculum guideline they are describing and the level at which it was developed, locally or by the Ministry of Education.

The body of each questionnaire is composed of statements related to the guideline, the user (the respondent) and the organization in which implementation is occurring. These statements were generated from the barriers identified earlier in this report and are stated in a positive manner (e.g., "The guideline is realistic in terms of what it expects the student to learn".) Respondents are asked to rate each statement on a four-point Likert-type scale from 1-strongly agree to 4-strongly disagree. The option also exists for the item to be identified as not relevant. A four-point scale is utilized in an effort to overcome the neutral choice tendency in scales offering an odd number of options.

The number of statements included in the three instruments differs, depending upon the organizational level of the respondent. Specifically BIQ-B contains 10 statements related to the guideline, 16 statements related to teachers as users, and 14 statements related to the organization. BIQ-B contains 10 statements related to the guideline, 16 statements related to the principal and teachers as users and 15 statements related to the organization. BIQ-C contains ten statements related to the guidelines, seven statements related to the consultant/co-ordinator as a user, and 12 statements related to the organization. The varying emphases in the three forms of the questionnaire reflect differing organizational positions and responsibilities in implementation.

All forms of the BIQ ask respondents to identify the approximate pupil population of the board in which the guideline is being implemented. Provision is also made for respondents to write comments about aspects of curriculum implementation that are of concern to them.

SAMPLING PROCEDURES

The population of this study was the membership of OPSTF. The size of the membership necessitated the use of a sample of the membership rather than the entire population. Participants for the study were randomly selected from computer lists at the Federation offices in Toronto. One thousand questionnaires were mailed to participants on February 26, 1980. Specifically, 300 were sent to principals, 600 to teachers and 100 to consultants/co-ordinators. Returns were received from 65% of the principals, 38% of the teachers and 44% of the consultants/co-ordinators.

Each respondent in the sample was requested to select a guideline that had been in use for at least one year and to state the name of the guideline selected. Table 1 summarizes the returns by subject areas. The selected guidelines fell into two categories: Ministry documents distributed to schools directly from the Ministry of Education and local guidelines developed at the school or school board level. Table 2 summarizes frequencies in these categories. Table 3 presents a summary of respondents by the size of the board in which they work.

TABLE 1
RETURNS BY SUBJECT AREA

SUBJECT AREA	TEACHERS n	TEACHERS %	PRINCIPALS n	PRINCIPALS %	CONSULTANTS/ CO-ORDINATORS n	CONSULTANTS/ CO-ORDINATORS %
Mathematics	53	23.1	46	23.5	9	20.5
English	48	20.9	63	32.1	3	6.8
Science	54	23.6	26	13.3	3	6.8
Home Economics/Industrial Arts	9	3.9	12	6.1	6	13.6
French	6	2.6	1	0.5	1	2.3
Social Studies	48	20.9	31	15.8	6	13.6
Health	1	0.4	5	2.6	5	11.4
Music	4	1.7	2	1.0	5	11.4
Physical Education	6	2.6	10	5.1	6	13.6
TOTAL	229	100.0	196	100.0	44	100.0

TABLE 2
TYPES OF GUIDELINES

TYPE	TEACHERS n	TEACHERS %	PRINCIPALS n	PRINCIPALS %	CONSULTANTS/ CO-ORDINATORS n	CONSULTANTS/ CO-ORDINATORS %
Local Guidelines	183	80	147	75	30	68.2
Ministry Guidelines	46	20	49	25	14	31.8
TOTAL	229	100	196	100	44	100

TABLE 3
RETURNS BY SCHOOL BOARD SIZE

SCHOOL BOARD SIZE	TEACHERS n	TEACHERS %	PRINCIPALS n	PRINCIPALS %	CONSULTANTS/ CO-ORDINATORS n	CONSULTANTS/ CO-ORDINATORS %
Less than 5,000	40	17.5	25	12.8	7	15.9
5,000 / 15,000	50	21.8	53	27.0	8	18.2
15,000 / 25,000	54	23.6	50	25.5	8	18.2
25,000 +	85	37.1	68	34.7	21	47.7
	229	100.0	196	100.0	44	100.0

Data were analyzed utilizing purely descriptive techniques. From responses, frequency tables were constructed. The resulting frequencies were expressed as percentages which were utilized for interpretation of data. Percentages in large samples are not affected greatly by single responses. They are, however, affected significantly in smaller samples. Responses by consultants/co-ordinators in this study may not, then, be as representative of the total population as those of teachers and principals.

In the following section data from the study and their implications will be presented. Specific recommendations are included for curriculum implementation efforts in the province of Ontario.

C. PERSPECTIVES FROM THE FIELD

The questionnaires were distributed to groups representing three of the major areas of influence in curriculum implementation: the teachers, the principals and the consultants/co-ordinators. Data were gathered from each of these groups in regard to the actual guides, the users of the guides, and the support system. In this section of the report, the data gathered for each of these groups will be presented. A discussion of the relationships that exist among all three groups concludes this chapter.

In order to compare the results for each group of respondents and among the three groups, decision rules were established. Items showing a combined percentage of 25 or higher in the Disagree and Strongly Disagree categories were considered to indicate barriers to curriculum implementation. As the study focused on barriers, these items received particular attention and comment. Items which were strongly agreed with by at least 40 percent of the respondents were also worthy of comment.

TEACHER DATA

Teachers are, in the final analysis, the key agents of curriculum implementation. Regardless of the degree of sophistication included in the documents or the organization, the teacher is the individual who adopts, adapts or disregards the material to be put into practice. It is therefore critical to examine the perceptions of teachers relative to the total process of curriculum implementation. This study therefore provides an assessment of teacher perceptions of the guidelines that are being distributed, their own competency in meeting the expectations of the developers, and the support system that is operating to effect systematic curriculum implementation.

The curriculum implementation questionnaire distributed to the selected sample of teachers across the province provided data focusing on the selected guideline, the user of that guideline (in this case the teacher) and the organization or support group for the teacher in the implementation process.

An analysis of the items which referred to the actual guidelines selected suggested that teachers were generally satisfied with the content and structure of the guidelines distributed to them. They perceived the guidelines as being well organized and containing an adequate number of specific learning objectives and planning strategies. In addition, teachers were well satisfied with the physical makeup of the guideline. These findings are not surprising when one considers the time and effort that have been expended in recent years across the province on the development aspect of guidelines in various subject areas.

Three items relative to the guidelines under question appeared to contain elements of some concern to teachers. More than half of the teachers surveyed suggested that evaluation techniques should be included in curriculum guidelines. Nearly one-third of the teachers felt that too much material was being presented in guidelines and time was not readily available to accomplish all that was expected. Slightly more than twenty-five percent of the teachers indicated that the lack of suggestions for suitable resource material was an obstacle to the implementation of some programmes.

The variety of opinions expressed in regard to guidelines may be attributed directly to the fact that this study did not allow for consistency in guideline selection. This reference was being made to whatever guideline a particular respondent chose.

An analysis of the items which referred to the teacher as user of the guidelines suggested that teachers were more concerned with their ability to implement the guidelines than with the actual guidelines themselves. The area of greatest concern represented by the data related to information about the guidelines. Fifty percent of the teachers would have liked to know more about the guidelines before they were expected to put them into practice. This item involved two areas of concern; time between distribution and implementation and teacher knowledge of the guideline itself.

Forty-seven percent of the teachers perceived that they had little opportunity for feedback to the developers of the guidelines. Curriculum developers present guidelines for implementation and teachers had the feeling that their input in terms of reaction or feedback was not required or even desired. The mechanism for such feedback is lacking. Although opinion was divided in regard to this item, the results strongly suggested that it warranted attention.

An analysis of the data in regard to workshops and inservice revealed that forty-eight percent of the teachers did not feel that they had been given enough preparation for responsible implementation. Even more significant was the fact that over one-third of the respondents felt very strongly about this issue suggesting that attention should be given to all aspects of teacher assistance in implementation.

A number of teachers expressed concern about the lack of opportunity to share ideas with other teachers in relation to the guidelines. Such opportunities would secure support for the teachers as well as foster an exchange of ideas among teachers. Nearly thirty-five percent of teachers felt that they needed more face-to-face communication of this type.

Teachers generally agreed that they had the skills and knowledge necessary for the implementation of the guidelines. The data suggested some concern about teacher commitment to the guidelines' implementation.

Analysis of the data dealing with the organizational component indicated that this was the area of greatest concern to teachers in regard to implementation of the guidelines. It was the perception of one-half of the teachers that in most instances the role of the principal in the implementation process had not been clearly defined. It seemed that even if principals knew their role in the process of implementation, such had not been communicated to teachers.

Second in order of concern was the problem of motivation. According to almost one-half of the respondents, central office personnel were not perceived as being motivators in the implementation process. Recent economic constraints necessitating cutbacks in personnel as well as revision of job specifications could account for the lack of impetus coming from central office personnel. If, however, these people are responsible for implementation, then provision should be made for their role as designers, communicators or motivators to be specified.

Communication received a relatively high negative response (over forty percent) in two areas. There appeared to be a breakdown in communication between teachers and principals in regard to the guidelines and their implementation, as well as a breakdown in the communication between the school personnel and central office personnel. If role definition is not specified, it is understandable that communication would be hampered.

An equally strong concern relates directly to the time that occurs between the receiving of guidelines and the implementation of guidelines. Over forty percent of the teachers indicated that they would like to know more about guidelines before they are expected to put them into practice.

Concern exists as well in the provision of resource materials to facilitate implementation. Almost forty percent of the teachers agreed that such support does not correspond to the level of their expectations. This finding is consistent with the need for more resource information in the document itself, as shown in the teacher response to the actual guidelines produced.

The results indicated that teachers generally were satisfied that the guidelines had been developed with input from principals/vice-principals and central office personnel. Thus, it can be assumed that the teachers perceived that the principals and vice-principals had an understanding of the guidelines to be implemented. Regarding the flexibility of the school

organization to facilitate the implementation of the guideline, the results suggested that teachers did not sense any discrepancy between the demands of the innovative material and the organizational structure. The agreement was generally high in regard to this item.

In reviewing the results of the questionnaire distributed to the teachers, the highest level of agreement was in regard to the documents themselves. These seemed to be generally acceptable in format and content. The teachers (users) perceived themselves to be adequate for the task of implementation, but more concern was expressed in this area than in regard to the document itself. The greatest area of concern is in regard to the organization and its many variables. According to the results of this study obstacles are present in each of these domains, but most would seem to exist at the level of organization. Table 4 presents a summary of the barriers that emerged as being most important with respect to the guide, the user and the organization, ranked within each category.

TABLE 4
MAJOR CURRICULUM IMPLEMENTATION BARRIERS IDENTIFIED BY TEACHERS, RANKED IN ORDER OF CONCERN*

THE GUIDE

The guideline contains insufficient number of suggestions related to student evaluation. (47.3%)

The guideline is unrealistic in terms of the amount of material it expects the teacher to cover. (32.07%)

The guideline contains an inadequate number of suggestions related to resource material. (27.2%)

THE USER

Teachers have inadequate opportunities to learn more about the guideline prior to implementation. (50.04%)

Teachers have been provided with insufficient workshops and in-service sessions related to the guideline. (48.2%)

Teachers have had insufficient opportunity to provide feedback related to the guideline. (46.9%)

Teachers have insufficient opportunity for face-to-face communication with other teachers related to the guideline. (34.7%)

THE ORGANIZATION

The principal's and/or vice principal's role in the implementation of the guideline is unclear. (50.5%)

Central office resource personnel have not attempted to motivate teachers in the implementation of the guideline. (46.5%)

There has been insufficient two-way communication between central

office resource personnel, principals and teachers related to the guideline. (42.6%)

There was insufficient time for the planning of the implementation of the guideline in my classroom. (41.7%)

There has been insufficient communication between the principal and teaching staff related to the guideline and its implementation. (40.8%)

The school board and/or principal has provided insufficient resource materials required for implementation of the guideline. (39.1%)

The procedures for implementing the guideline were non-specific and unclearly stated. (36.9%)

Teachers, principals and consultants/co-ordinators were insufficiently involved as a team in planning for the implementation of the guideline. (33.8%)

The principal has not displayed high expectations for teachers related to the implementation of the guideline. (33.1%)

Staff members have not displayed a positive attitude to the guideline. (31.6%)

Principals do not appear to be knowledgeable about the guideline. 26.7%)

Principals have not provided sufficient support during guideline implementation. (26.3%)

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*Order of concern is determined by the percentage of respondents answering Disagree and Strongly Disagree to the item. Concern is said to exist when the total of these two categories is 25 percent or more.

From Table 4 another perspective is brought to bear on the concerns of teachers in regard to implementation. If the items are ranked on the basis of the percentage of teachers who disagree or show concern then the following list can be seen to represent the ten most significant teacher-perceived needs.

1. The principal's and/or vice principal's role in implementation should be clearly defined.
2. More workshops and inservice would be desirable.
3. Suggestions in regard to student evaluation should be included in the guidelines.
4. Teachers need the opportunity to provide feedback.
5. Central office resource personnel should provide motivation for teachers.
6. Communication should be improved between central office resource personnel, principals and teachers related to the guideline.
7. Teachers need additional opportunities to learn about the guideline.
8. Time is required on the part of teachers to plan for the implementation.

9. More communication is required between the principal and teaching staff related to the guideline and its implementation.
10. More resources should be provided by the school board and/or principal.

PRINCIPAL DATA

Almost everyone agreed that principals should be the instructional leaders of the school. Distinctions have been made in the literature between the administration of the instructional programme, which implies maintenance activities, and the improvement of the instructional programme, which connotes leadership activities. There is considerable agreement today that the principal is the person responsible for designing, implementing and evaluating changes in the instructional programme of the school.

It is beyond the scope of this investigation to specify the ideal role of the principal in curriculum implementation. Our purpose was to identify the major obstacles which the principals perceive were preventing them from fulfilling their role. The literature suggests that major barriers may prevent principals from accomplishing their role in curriculum implementation. Earlier in this document, we identified the major barriers in three areas, namely, the curriculum guide, the user and the organization. Following the identification of the obstacles, a questionnaire for principals was developed.

Tabulation of principal responses to the questionnaire produced the following results. Principals indicated a high level of satisfaction with the specific guidelines. Nine of the ten items relating to the guideline received a response of higher than 40% in the Strongly Agree column. The respondents felt that the guidelines were well organized, that the rationale in each document was clearly explicated and that the physical makeup of the guidelines was acceptable. Such findings were not unexpected. Most jurisdictions have spent considerable time and money in producing impressive documents. Many have been printed by commercial firms. In some instances, principals may have been commenting on the general appearance of the guideline. The overall positive acceptance of curriculum guidelines by principals was an important finding of the study.

Similar findings were evident in the analysis of specific items relating to the user. Virtually all of the principals indicated a commitment to the specific guideline under discussion; over half indicated a strong commitment. This result suggests that a majority of principals have accepted responsibility for curriculum implementation.

However, several of the items in this section were perceived by principals to present concerns in the implementation process. Nearly one-half of the principals would have appreciated more opportunity to learn about the guideline prior to implementation. Response to one item sug-

gested that they may not have received sufficient inservice assistance prior to implementation, and many of the respondents expressed dissatisfaction with this component. Data from the teacher questionnaire indicated that there was not sufficient information about the role of the principal in the implementation process. If such information is not available, administrators may not see the necessity of principal preparation for implementation. However, this finding was not necessarily supported by the principals. Results of one of the items indicated that 85 percent of the principals find the guidelines does contain sufficient information relating to their role in implementation.

Communication problems were perceived by the principals as another area of concern in the implementation of curriculum guidelines. One-third of the principals felt that teachers did not have sufficient opportunity to interact with resource persons in discussing implementation of the particular documents. Communication with other teachers about the guidelines was also seen to present a barrier to the process. Results of the survey indicated that almost one-third of the principals felt that teachers did not have sufficient opportunity to talk to other teachers about curriculum concerns. Frequently administrators provide time for discussion with resource persons but neglect the opportunity for teacher-to-teacher interaction. In this context, one-fourth of the principals perceived the lack of teacher opportunity to provide feedback on the guideline. It is difficult to overcome such a barrier since the writing of the document usually involves an elaborate feedback system and once the final document is produced, curriculum officials may feel that feedback is not necessary.

Thirty percent of the principals felt that sufficient time may not have been made available for proper implementation. The literature suggests that a considerable amount of time elapses between introduction of an innovation and general acceptance of it. General acceptance of an innovation may take from seven to ten years. The data suggested that school officials have been somewhat impatient and want overnight implementation.

The principals identified five areas of concern relating to barriers to curriculum implementation found within the organization itself. Twenty-eight percent of the principals were concerned about the lack of resource material for implementing the guideline. In a time of budgetary restraints, this finding was not entirely unexpected. Principals are constantly looking for additional resources, and in some jurisdictions they are not as plentiful as they were several years ago.

Concerns for the clarity of the superintendent's role were expressed by one-fourth of the principals. It was interesting to note that teachers also perceived a lack of clarity in the role of their immediate superior, the principal.

One-fourth of the principals perceived some difficulty with the procedures used for implementing the guideline. They did not feel that the

procedures had been clearly stated by the administrators. A similar number perceived a lack of two-way communication between officials and the schools in the implementation process. This finding is supported in the literature on communication. Organizations never have perfect communication; all they can strive for is improved communication.

Principals were more supportive of the organization than are the teachers. They strongly endorsed the position that the organization of the school is flexible enough to accommodate guideline implementation. It is possible that principals, from their line position in the organization, are able to see reasons for certain organizational decisions. As a result, they may be more supportive of the organization.

Table 5 presents a summary of the areas of concern expressed by the principals in regard to the guideline, the user, and the organization. According to the decision rules established at the outset of this study, the principals do not perceive any barriers to implementation in terms of the guidelines produced. Five barriers for both users and the organization are outlined in this table.

TABLE 5
MAJOR BARRIERS TO CURRICULUM IMPLEMENTATION IDENTIFIED BY PRINCIPALS RANKED IN ORDER OF CONCERN*

THE GUIDE USERS

Principals have had inadequate opportunity to learn about the guideline prior to implementation. (45.7%)

Teachers have had insufficient face-to-face communication with resource personnel related to the implementation of the guideline. (32.4%)

Teachers have had insufficient opportunity for communication with other teachers related to the guideline. (31.2%)

There was insufficient time available to plan for the implementation of the guideline. (29.5%)

There have been insufficient workshops and inservice sessions related to the implementation of the guideline. (27.2%)

THE ORGANIZATION

There has been insufficient two-way communication between the school board office, principals, vice principals and teachers related to the guideline. (28.4%)

The school board office has provided insufficient resource material for the guideline. (27.8%)

There has been insufficient communication between the superintendent and the principal related to the implementation of the guideline. (27.2%)

The superintendent's role in the implementation of the guideline has been unclear. (26.1%)

The procedures for implementing the guideline were non-specific and unclearly stated. (26.0%)

*Order of concern is determined by the percentage of respondents answering Disagree and Strongly Disagree to the item. Concern is said to exist when the total of these two categories is 25 percent or more.

The barriers as perceived by the principals, when made into recommendations and ranked, were as follows:

1. Principals need more information about guidelines prior to implementation.
2. Communication should be improved between teachers and resource personnel related to the guideline.
3. Teachers need opportunities to confer with other teachers in regard to the implementation of the guideline.
4. Time is required to plan for the implementation of the guideline.
5. Communication should be improved between school board office, principals and teachers related to the guideline.
6. More resources should be provided by the board.
7. Teachers need additional workshops and inservice related to the implementation of the guideline.
8. Communication should be improved between principals and superintendents in regard to implementation.
9. The superintendent's role in implementation should be clearly defined.
10. Implementation procedures should be specific and clearly outlined.

This list provides administrators with the areas that need attention when new guidelines are being implemented. Although there may be certain items about which the organization can do very little, there are indications that greater care is needed in some aspects of the implementation phase.

The principal barriers are not insurmountable. It is essential that principals look for better ways of improving communication within their schools. Since curriculum implementation has been identified as a major function of principals, they must be given additional assistance in performing this task. In many jurisdictions it is a new role and will require considerable preparation. Many of the incumbents are not trained to perform as curriculum managers. The data suggests that measures need to be taken by senior administrators to assist principals to perform this vital function in the schools.

CONSULTANT/CO-ORDINATOR DATA

Few attempts have been made to study the problems inherent in the role of the consultant/co-ordinator in the context of curriculum implementation. For many years, subject specialists in Ontario worked directly with

teachers in improving instruction. During the past few years there has been a trend for school boards to assign consultants/co-ordinators the task of developing materials and managing the implementation process. Charged with such responsibility, these individuals perceive barriers to implementation that exist in the three areas addressed by this study.

Tabulation of the results indicate that consultants/co-ordinators are satisfied with the number of specific objectives included in the guidelines as well as with the overall organization of the material presented. They also felt that the guidelines are realistic in what they expect from students. These findings are not surprising when one considers the extent of the involvement of consultants/co-ordinators in the guideline development process. It is interesting to note, however, that over one third of the consultants/co-ordinators, along with teachers and principals, sensed that the lack of guideline suggestions related to student evaluation was a barrier to the implementation process. These results indicate that more attention to this component will be necessary in future curriculum development.

The findings in this section also indicate that consultants/co-ordinators have a strong commitment to make the guidelines work. In many situations, guideline implementation is part of the consultant's co-ordinator's job description; therefore, one would hope that a high commitment was prevalent. Consistent with their responsibility was their knowledge of the guideline and the item referring to this was well supported.

The major barrier to guideline implementation as perceived by nearly one-third of the consultants/co-ordinators was the lack of clarity in their role in the implementation process. This finding was consistent with the expressions of the need for role clarity by the other groups of respondents.

Analysis of the results indicated that a number of barriers exist in relation to the organizational component. Almost one-third of the consultant/co-ordinators felt that procedures were not clearly specified for curriculum implementation. One-half of them believed that not enough time was alloted for the planning of implementation. If implementation is viewed as an event rather than a process, as seems to be the case traditionally, then it is understandable that time for implementation planning would be considered unnecessary. It would seem that as implementation comes to be viewed as a process, many of these organizational barriers should be overcome.

One-half of the consultants/co-ordinators viewed the structure of many schools as inflexible to the point of not accommodating the demands made by guidelines. Such accommodation must come to be seen as planning for change or adapting to suggested change.

Lack of clarity in the principal's and/or vice-principal's role designation in regard to implementation was seen by nearly one-third of the consultants/co-ordinators as a major barrier. This finding was consistent with that of the teachers and principals. When roles are not defined, communi-

cation becomes a problem, and indeed the same number of consultants/co-ordinators viewed lack of communication as a major concern. Communication was viewed as a problem at all educational levels between resource personnel and teachers, between resource personnel and principals and between teachers and principals.

Approximately forty percent of the consultants/co-ordinators sensed a lack of knowledge in both teachers and principals in regard to the guideline. Nearly one-third perceived that the principals did not have high expectations for the teachers in regard to the implementation of the guidelines, nor did they feel that teachers generally displayed positive attitudes toward the guidelines to be implemented.

The organizational structure was viewed by consultants/co-ordinators as a major focus for attention in this study. Principals were the target for a lot of criticism. However, role clarity seemed to be a significant factor to be considered. If it is not stated what the administrator is to do, it seems unfair to criticize when little is done. If senior administrators wish to have their principals perform a role in curriculum implementation, someone must specify these responsibilities. Similarly, some attempt must be made to give incumbents the necessary skills to perform the role.

Table 6 presents a summary of the areas of concern expressed by the consultants/co-ordinators in regard to the guideline, the user, and the organization. It is interesting to note that the major focus from the point of view of the consultants/co-ordinators is on the organization, suggesting that steps must be taken to encourage co-operation at all levels of the educational hierarchy.

TABLE 6
MAJOR BARRIERS TO CURRICULUM IMPLEMENTATION IDENTIFIED BY CONSULTANTS/CO-ORDINATORS RANKED IN ORDER OF CONCERN*

THE GUIDELINE

The guideline should contain more suggestions for student evaluation. (36.3%)

THE USER

My role in the implementation of the guideline has not been clear. (31.8%)

THE ORGANIZATION

There was insufficient time for the planning of the implementation of the guideline. (50.0%)

The school's organization is generally not flexible enough to accommodate the guideline. (50.0%)

The principals and/or vice principals do not appear knowledgeable about the guideline. (40.9%)

Resource personnel did not provide sufficient face-to-face communication related to the guideline. (36.4%)

Teachers do not have sufficient knowledge of the guideline. (36.3%)

The principal's and/or vice principal's role in the implementation of the guideline are/is not clear. (31.8%)

There has been insufficient communication between the consultants/co-ordinators and teachers related to the guideline and its implementation. (31.8%)

The principals and/or vice principals do not have high expectations for teachers related to the guideline. (31.8%)

The procedures for implementing the guideline were not specific and clearly stated. (31.8%)

There has not been sufficient two-way communication between the school board office, principals and/or vice principals and teachers related to the guideline. (31.8%)

Principals and/or vice principals, teachers and consultants/co-ordinators were not sufficiently involved as a team in planning the implementation of the guideline. (27.3%)

Staff members have not displayed a positive attitude toward the guideline. (27.3%)

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*Order of concern is determined by the percentage of respondents answering Disagree and Strongly Disagree to the item. Concern is said to exist when the total of these two categories is 25 percent or more.

The following are the ten most significant barriers to implementation suggested by consultants/co-ordinators. They are listed here in ranked order and have been written as positive recommendations.

1. Time is required on the part of teachers to plan for implementation.
2. The organization of schools must be flexible enough to accommodate implementation.
3. Principals need more knowledge of the guideline.
4. Resource personnel need more face-to-face communication with teachers.
5. Teachers need the opportunity to increase their knowledge of the guideline.
6. Suggestions in regard to student evaluation should be included in the guideline.
7. Consultant's/co-ordinator's roles in guideline implementation must be clearly defined.
8. The principal's role in implementation should be clearly defined.
9. Communication related to the guideline should be improved among school board office, principals and teachers.

10. There is a need for principals to articulate their expectations in regard to the implementation.

SUMMARY

Table 7 presents a summary of the ten most strongly supported barriers for each of the three groups. At a glance, it appears that the perceived needs at the teacher level relate to instructional concerns. Principals, on the other hand, appear more concerned about communication among the participants in the implementation process and about role specification. Consultants/co-ordinators, while concerned about role and communication, focus on the guideline and resources for the classroom.

All three groups show general satisfaction with the guidelines that are being developed and distributed. One area of concern that emerges on the part of both teachers and consultants/co-ordinators is the lack of attention to specific recommendations for student evaluation.

Role definition for those involved in the implementation process is included by all three groups. Implementation is a relatively new emphasis and requires particular skills, and it seems that people generally need information about their role in the process. This finding is consistent with the need to specify the procedures for implementation.

Communication remains a problem in education. This need is shown by the number of times all three groups suggest that the opportunity should exist to exchange information related to the material to be implemented.

Both principals and consultants/co-ordinators suggest that principals have inadequate information about the guidelines prior to their implementation. Teachers sense a need to know more about the guidelines themselves but do not indicate that the lack of knowledge on the part of principals is a major barrier.

Two of the three groups express a need for teachers to share information with other colleagues. This type of information exchange can occur informally or as workshop/inservice activity. Teachers and principals support this need. Consultants/co-ordinators, however, have identified the need for more teacher opportunity to increase their knowledge of guidelines. Perhaps the face-to-face communication perceived as a need by consultants/co-ordinators could be viewed as inservice.

The lack of resources, like communication, is a continual source of frustration. Teachers and principals perceive the need for more efficient provision of resources associated with new guidelines. Teachers are looking to the principal for help in this area while principals are looking to the board. Consultants/co-ordinators, however, do not identify a lack of resources as a major barrier.

Planning time for implementation is a concern that is expressed by all three groups. More time is required between the delivery of guidelines and the expected implementation. If procedures for implementation are

TABLE 7
MAJOR BARRIERS TO CURRICULUM IMPLEMENTATION
AS PERCEIVED BY THREE GROUPS

TEACHERS	PRINCIPALS	CONSULTANTS/ CO-ORDINATORS
1. The principal's role in implementation is not clearly defined.	1. Principals have inadequate information about guidelines prior to implementation.	1. There is inadequate time for teachers to plan for implementation.
2. There are inadequate workshops and inservice.	2. There is inadequate communication between teachers and resource persons related to guidelines.	2. The school's organization is not flexible enough to accommodate implementation.
3. Guidelines contain inadequate suggestions for student evaluation.	3. There are insufficient opportunities for teachers to confer with other teachers regarding the implementation of guidelines.	3. Principals have inadequate knowledge of guidelines.
4. Teachers have inadequate opportunity to provide feedback.	4. Inadequate time is provided to plan for implementation.	4. Resource personnel have inadequate opportunity for face-to-face communication with teachers related to guidelines.

5. Central office resource personnel provide too little motivation for teachers.	5. There is inadequate communication among school board office personnel, principals and teachers related to guidelines.	5. Teachers have insufficient opportunity to increase their knowledge of guidelines.
6. There is inadequate communication between central office personnel, principals and teachers related to guidelines.	6. Insufficient resources are provided by the board.	6. Guidelines have inadequate suggestions for student evaluation.
7. Teachers have insufficient opportunity to learn about guidelines.	7. Insufficient workshops and inservice opportunities are available for teachers related to guidelines.	7. The consultant's/co-ordinator's role in curriculum implementation is not clearly defined.
8. Time is not provided for teachers to plan for implementation.	8. There is inadequate communication between principals and superintendents regarding implementation.	8. The principal's role in curriculum implementation is not clearly defined.
9. There is inadequate communication between the principal and teaching staff related to guidelines and their implementation.	9. The superintendent's role in curriculum implementation is not clearly defined.	9. There is insufficient communication among school board personnel, principals and teachers related to guidelines.
10. Insufficient resources are provided by the principal.	10. Implementation procedures are not specific and clearly outlined.	10. Principals do not articulate their expectations in regard to implementation.

to be specified, as suggested by the respondents, then the time structure would likely be incorporated. There is a need to plan for implementation and not expect it to happen automatically on receipt of a document.

The teachers perceive that they are expected to be implementers of prepared guidelines and have little input into decisions relative to the continued use or revision of them. Implementation must be viewed as a process and not an event, thus enabling teachers to perceive themselves as playing a significant role in this process. An opportunity for feedback is an essential part of implementation.

At the outset of the chapter, decision rules were established to aid in the analysis and discussion of the data. These rules applied to areas of implementation which were seen as containing barriers as well as those areas which constituted little concern in the perception of the respondents. The focus for this study was the identification of barriers to the implementation process, and the discussion in this section has related primarily to these perceived barriers from the point of view of three of the key educational groups responsible for curriculum implementation.

D. RECOMMENDATIONS

The purpose of this study was to determine what is presently occurring in terms of curriculum implementation at the school level. Many guidelines have been developed and distributed, but the literature supports the contention that distribution does not insure implementation. It is therefore reasonable to question the use being made of the guidelines developed and disseminated across the province. Are teachers using these documents? What concerns do they have in regard to their use? What role are principals and central office personnel playing in the process of curriculum implementation? In an attempt to gain information relative to the problem of guideline implementation, the OPSTF commissioned this study. In co-operation with the Curriculum and Research Committee of OPSTF, the co-investigators agreed to describe the current situation of curriculum implementation in Ontario public elementary schools. The situation has been investigated in terms of the perception of three major groups of educators involved in the implementation process — teachers, principals and consultants/co-ordinators. The current situation reveals that barriers do indeed exist that are presently blocking educators from effectively implementing curriculum guidelines. On the basis of the data collected, these barriers have been identified and discussed in the previous sections of this report.

Identification of the barriers does not in itself provide a solution to the problem of curriculum implementation. This section of the report will outline recommendations based on the findings of this study. These recommendations are listed in order of priority and represent a composite of the barriers perceived by all three groups of respondents.

RECOMMENDATIONS

Recommendation #1:

THAT COMMUNICATION CHANNELS RELATED TO THE GUIDELINES BE ESTABLISHED AMONG CENTRAL OFFICE PERSONNEL, PRINCIPALS AND TEACHERS.

Recommendation #2:

THAT TIME BE PROVIDED FOR TEACHERS TO PLAN FOR IMPLEMENTATION.

Recommendation #3:

THAT PRINCIPALS BE GIVEN MORE INFORMATION ABOUT GUIDELINES PRIOR TO IMPLEMENTATION.

Recommendation #4:

THAT GUIDELINES INCLUDE MORE SUGGESTIONS FOR EVALUATION.

Recommendation #5:

THAT THE PRINCIPAL'S ROLE IN IMPLEMENTATION BE CLEARLY SPECIFIED.

Recommendation #6:

THAT TEACHERS HAVE MORE OPPORTUNITIES TO LEARN ABOUT GUIDELINES.

Recommendation #7:

THAT MORE WORKSHOPS AND INSERVICE BE PROVIDED.

Recommendation #8:

THAT COMMUNICATION BE INCREASED BETWEEN RESOURCE PERSONNEL AND TEACHERS RELATED TO THE GUIDELINES.

Recommendation #9:

THAT COMMUNICATION BE INCREASED BETWEEN THE PRINCIPAL AND THE TEACHERS RELATED TO THE GUIDELINE AND ITS IMPLEMENTATION.

Recommendation #10:

THAT THE ORGANIZATION OF THE SCHOOL BE MADE FLEXIBLE ENOUGH TO ACCOMMODATE THE IMPLEMENTATION.

Recommendation #11:

THAT PROVISION BE MADE FOR TEACHER FEEDBACK.

Recommendation #12:

THAT CENTRAL OFFICE RESOURCE PERSONNEL PROVIDE MOTIVATION FOR TEACHERS.

Recommendation #13:

THAT PRINCIPALS PROVIDE SUFFICIENT RESOURCES.

Recommendation #14:

THAT THE CONSULTANT'S/CO-ORDINATOR'S ROLE IN IMPLEMENTATION BE CLEARLY DEFINED.

Recommendation #15:

THAT PRINCIPALS CLEARLY ARTICULATE THEIR EXPECTATIONS FOR IMPLEMENTATION.

Recommendation #16:

THAT TIME BE PROVIDED TO PLAN FOR IMPLEMENTATION.

Recommendation #17:

THAT BOARDS PROVIDE ADEQUATE RESOURCES FOR THE IMPLEMENTATION OF GUIDELINES.

Recommendation #18:

THAT COMMUNICATION BE IMPROVED BETWEEN PRINCIPALS AND SUPERINTENDENTS IN REGARD TO IMPLEMENTATION.

Recommendation #19:

THAT THE SUPERINTENDENT'S ROLE BE CLEARLY SPECIFIED.

Recommendation #20:

THAT IMPLEMENTATION PROCEDURES BE SPECIFICALLY AND CLEARLY OUTLINED.

Several key concerns emerge as the list of recommendations is examined. Communication is seen as a major barrier to curriculum implementation. Four of the recommendations relate to this barrier. As a result of this study it is imperative that if implementation of guidelines is a legitimate concern of school boards, then channels of communication related to the guidelines and their implementation must be established among people at all levels of the educational hierarchy.

The second major barrier exists in the area of role clarification, and four recommendations relate to this concern. It seems obvious that implementation has been viewed as an event rather than a process. The idea of a process must be clearly established if implementation is to be effective. Within this process, roles must be carefully defined. The data reveal that people are not opposed to the guidelines that are produced but are unsure of what is expected of them in the process of putting these guidelines to work. If the process and roles were specified it would not be difficult for principals to articulate their expectations.

The third major concern relates to time. Two recommendations relate to this problem. Teachers perceive that they are expected to implement automatically when guidelines arrive. With the number of guidelines developed in the past decade, implementation has become an overwhelming

task in many areas of the province. Teachers need time to implement effectively — time to plan for the implementation of any one guideline and time between the adoption of new guidelines. Principals as well sense the need in this area. It would seem that they are reacting to the number of new programmes emerging and the expectation in regard to the implementation of each. This finding was supported by the comments made by all three groups on the questionnaires. The comment made most often was that too many new guidelines have arrived in too short a period of time. An overload seems to exist.

The fourth major area of concern relates to resource support. Teachers perceive the need for resources at the school level while principals perceive the need for resource support at the school board level. Teachers refer to the fact that resources are available over time but often unavailable at the point in time when implementation is to occur. Principals refer to lack of resource support in terms of money, materials and people.

The fifth key focus is the acquisition of information about guidelines. Several recommendations relate to this concern. A need exists for both principals and teachers to gain information about guidelines. Workshops and inservice can be a vehicle for the provision of this information and will provide a means for the needed motivational support for teachers by central office personnel.

As has been stated, guidelines in general are well received. The need exists, however, for more attention to specific recommendations related to student evaluation. This item receives a high priority in the ranking of barriers, suggesting that it is worthy of attention.

One item remaining to be considered is school organizational inflexibility, which is perceived as a major barrier to guideline implementation. Incorporated in the concept of organizational flexibility are elements of role clarity, communication and the means for acquisition of knowledge about guidelines. It would seem feasible to assume that an understanding of the process and of one's role within that process would aid in the development of organizational support for implementation.

A significant number of these recommendations could be met by the development of an implementation strategy for each school board. Implementation requires careful planning — the kind of planning that incorporates strategies that alleviate the barriers that seem to exist. No one model will meet the needs of all situations. Once it is understood that implementation does not automatically occur, it is incumbent on school personnel to acquaint themselves with barriers and to plan for implementation.

Whatever model is developed for use, the five areas outlined above must be addressed in order to reduce barriers to the implementation process. The next section of this report will address each of these major concerns and attempt to provide practical suggestions for planners of implementation.

SECTION II

Strategies for Curriculum Implementation

A – A Planning Model

From an examination of the major barriers to implementation identified in this study, it is apparent that they are related to five distinct concepts. These are communication, role clarification, time, resource support, and acquisition of information about the curriculum. Knowing about these barriers to implementation in a situation gives planners the information needed to make implementation more successful. In this section, some suggestions for overcoming these barriers are described. These suggestions are based on a number of assumptions which are presented and discussed below.

Assumptions

1. **Curriculum implementation can and should be planned.**
   Curriculum implementation requires people to learn new skills and to formulate new ideas. Different individuals learn at different rates, and therefore implement curricula at different rates. The rate at which people learn to change is directly influenced by the success they have had in previous attempts to change. This implies that the rate at which implementation proceeds is influenced by the success of previous implementation efforts, and that efforts in the future will be affected by current efforts. Implementation, like learning, can be fostered by careful structuring and planning of activities.
2. **Curriculum implementation occurs in different phases which are sequential and interrelated.**
   There is considerable disagreement about the names to be ascribed to each phase and about the indicators of the end of one phase and the start of another, but there is agreement about the need for different emphases throughout the implementation process. The phases chosen for use in this discussion are those determined from the perspective of the users of the curriculum. They are

awareness, early use and full use/renewal. The awareness phase of implementation may be the most significant for planners of curriculum implementation. If the strategies utilized in this phase are ineffective, little or no real use will be made of the curriculum in the classroom. Evidence is growing which suggests that a carefully planned and realistically timed management effort in this phase speeds up the overall implementation process. The second phase, early use, represents the time in the implementation process during which parts and pieces of the curriculum are being tried by teachers in their classrooms. Typically, even though teachers may think they are using the new curriculum, their actual classroom practice often is not reflective of the expected change. It should be recognized that traditionally many teachers do not develop in their usage of the curriculum beyond this point unless there are carefully planned, individually targeted growth opportunities provided to help them achieve a higher level of use. The full use/renewal phase of curriculum implementation may be characterized by two alternative situations. The first sees teachers utilizing the curriculum as it was intended and consciously seeking to enhance its impact on student learning in classrooms. The second has teachers adapting the curriculum materials to meet the specific needs of their classroom and school while operating within the philosophical framework fundamental to the original document.

3. **Strategies for overcoming the barriers to implementation are not only related to the phase of implementation and the conceptual area in which the barriers exist, but they may also be described in terms of the people who should initiate the activities.**
   Three groups of people are seen as the key actors in the process of implementation. Teachers in the classroom are the individuals who adapt, adopt or disregard the material to be put into practice. Principals, on the other hand, are the curriculum leaders in the school and as such have responsibility for designing, implementing and evaluating changes in the instructional programme of the school. Consultants/co-ordinators are charged with the responsibility for developing materials and managing the implementation process at a system level.

A Model

For the purpose of discussion, a framework has been developed to assist in the viewing of implementation strategies. Assuming that implementation is a process which can and should be planned, this framework assists in the selection of strategies by the appropriate people at the appropriate time.

The three-dimensional model presented in Figure I isolates the factors to be considered. Three phases of implementation are identified moving from the point of awareness of the innovation through its early use and on to full use and renewal. The earlier study pointed to five major areas to be addressed during curriculum implementation, and the model incorporates each of these areas of concern. The third dimension of the model relates to the major actors or personnel involved in the process. This model thus provides a means for identifying and revealing relationships among the complex interacting components in curriculum implementation.

Not all of the boxes in the model are of equal importance in planning for implementation. There is considerable evidence to support the contention that the majority of strategies should be initiated in the awareness phase if implementation is to be effective. In addition, the relative importance of the people initiating strategies changes over time with the largest input by the consultant/coordinator in the early planning shifting gradually to principal, and then to the teacher.

This section is organized around the major barriers to implementation identified in the original study, and some suggestions are presented relative to the strategies for overcoming these barriers. There is no attempt to provide an exhaustive list related to any particular area, but rather to provide suggestions which may spark the generation of context-specific strategies to encourage effective curriculum implementation in the schools of the province of Ontario. At the conclusion of each segment, a checklist is presented to provide further assistance in planning.

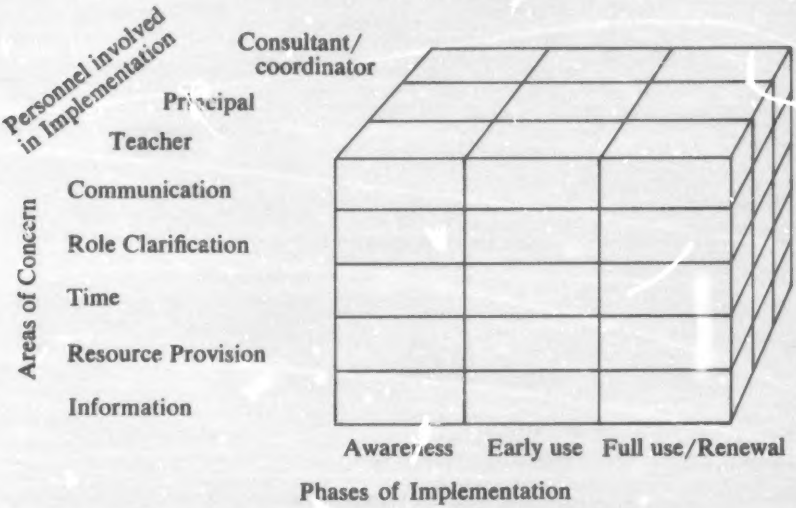


Figure I: Framework for the Discussion of Strategies Related to Curriculum Implementation.

B – Communication

Effective communication is the cornerstone of good management, yet in this study, communication is perceived to be the major barrier to implementation effectiveness. The items in this study in which the word "communication" occurred are primarily related to the absence of effective communication channels or networks within the system in which implementation is to occur. According to Table 4, teachers perceive the need for more effective feedback mechanisms. Teachers, principals and consultants/co-ordinators are in agreement that the communication channels throughout the system present a barrier to effective implementation. It is this aspect of the communication problem on which this discussion is focused.

Networks of Communication

The current emphasis on participation management, while a promising one, has created some misconceptions related to communication in organizations. Somehow many people have come to believe that there is only one effective communication network for an organization, the "all channel" network, in which all persons have access to all information and have the right or obligation to participate in all communication. There are, however, other networks of communication which should be considered throughout the implementation process to facilitate the speed of information and to prevent information overload.

Different communication networks have different impacts on both the organization and the individuals within the organization. At the individual level, one's position within the communication system will often determine the kind of contribution the person can make to the organization and the amount of knowledge the person has about organizational activities. The structure of the communication pattern directly or indirectly affects who communicates with whom, the number of different people with whom an individual communicates, how widely information is disseminated and shared, how much or how little information an individual typically possesses, and satisfaction within the job situation.

There are many networks of communication in organizations and different networks can and should be used within the same organization for different tasks. Six of the more common communication networks are pictured in Figure 2.

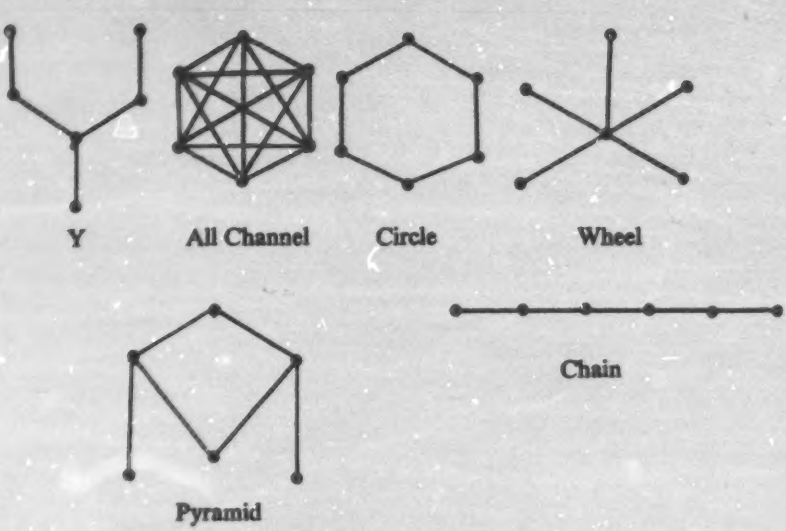


Figure 2: Common Communication Networks

The structure of different communication networks gives them specific properties which lead to differences in their effectiveness and efficiency. The number of potential communication channels is one such property. The "all channel" network allows each person to communicate with every other person. In the network shown in Figure 2, with six individuals depicted, 15 communication channels are available for use. The "Y" and the "wheel" allow only five channels; the "circle", the "pyramid", and the "chain", six.

A second structurally-determined characteristic relates to the equity of communication possibilities. In the "Y" pattern, one person has direct access to three others, while two have access to only two others, and three to only one. In the "all channel" pattern, each person has access to the same number of individuals.

Communication in organization serves several possible functions. Thayer (1961) identified five general areas: being informed or informing; evaluating one's input, another's output or an ideological scheme; directing, instructing or being directed or instructed; influencing or being influenced; and communicating in ways which do not concern the accomplishment of organizational objectives. The key to effective communication in an organization is matching the type of communication with the most effective network. Generally speaking, the more highly centralized networks allow for the greatest speed and accuracy in simple tasks. Decentralized networks provide the most accurate means of complex problem solving and adapt more readily to changes in task. The greatest levels of job satisfac-

tion emerge from decentralized networks, because more individuals have a chance to participate and to assume greater responsibility for the performance of the task at hand.

In essence, the type of communication network chosen for the acquisition and dissemination of information during the curriculum implementation process will directly influence its success. Those which allow rapid transmission of information are useful for dispensing general information. Nonetheless, the assumption of responsibility for actions is greatly influenced by the opportunity for input by all individuals involved in a change.

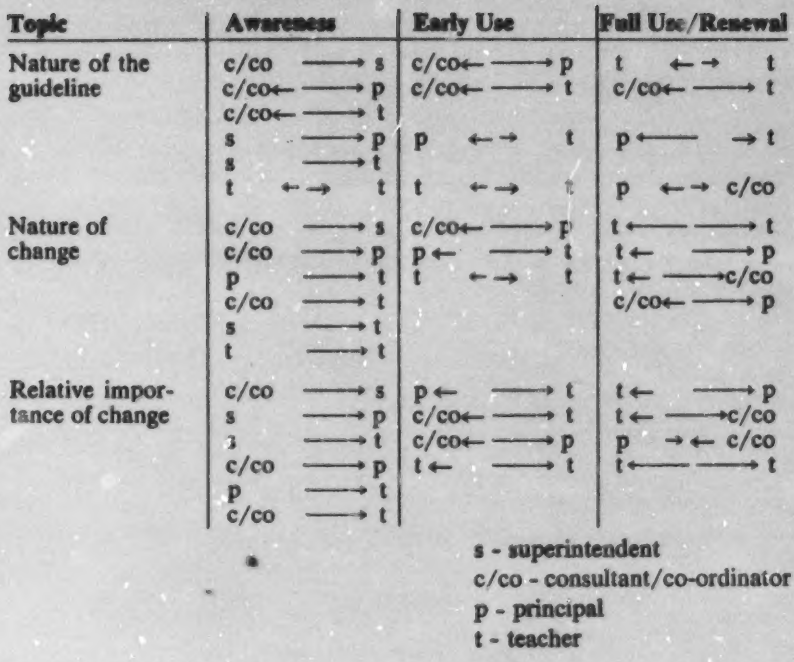
The What and Who of Communication

The consideration of what must be communicated throughout the implementation process results in an extensive listing. Although specific information varies from situation to situation, there are areas of major concern which can be predicted. Some of these are listed in Figure 3. By examining these topics of communication, it becomes apparent that the source and target of the communication will vary from phase to phase and from topic to topic, as well as from source to source. (Figure 4).

Awareness Stage	Early Use Stage	Full Use/Renewal Stage
Nature of guideline	Nature of guideline	Effectiveness of change
Nature of change	Nature of change	
Relative importance of change	Effectiveness of change	Problems resulting from change
Expectations regarding the degree of change	Problems resulting from attempted change	Revisions needed in guideline
Time line proposed	Success with change	Success with change
Resource needs and provisions	Support available for change	Support available
	Revised timelines	Revised timelines
	Altered resource needs	Altered resources

Figure 3: Major Topics of Communication Throughout Stages of Implementation.

What is crucial in all of this is that all channels of communication remain open and that everyone knows to whom the information should flow. A second major consideration is that feedback should not only be actively sought, but also desired. All the planning in the world will not guarantee adequate feedback unless it is honestly and openly sought.



Note 1: The relative length of the arrow depicts the quantity of desirable communication.

Figure 4: Communication Patterns Throughout Implementation.

The How of Communication

The means of communicating information about a curriculum change are limited only by the planner's imagination. Among the more obvious means are presentations at meetings, information bulletins, memoranda to individuals, briefs, press releases, audiovisual information packets, face-to-face conversations, telephone calls, conference calls, and the ever present "rumour mill". It is good practice to provide more than one means of communicating information. Public meetings or committee meetings should be preceded or followed up with highlighted summaries of important information or telephone calls.

All teachers and principals involved with the curriculum change need to know to whom they can turn for advice and to whom they can make suggestions for improving the change. In large jurisdictions, it may be important to have a "key" teacher responsible for finding out how the implementation effort is going in the school; the successes, the problems and the issues and the frequent and regular meetings of key teachers from a jurisdiction provide one means for those responsible to be aware imme

diately of problems which may arise so that they can solicit solutions from persons involved in the change. This group of key teachers provides a mechanism for dissemination of additional information relative to the innovation. It must be considered a supplement, not a replacement, for the face-to-face contact between teachers, principals and consultants/co-ordinators.

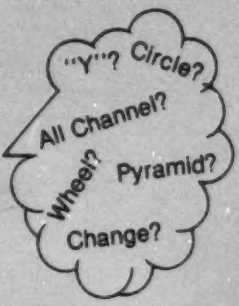
Summary

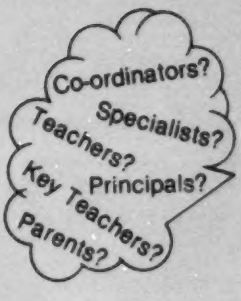
Throughout the implementation process, the nature of the communication changes from that suitable for large groups (more general information), to that suited to individual input and feedback (more specific information). Centralized networks may be appropriate for more general communication, but it is the decentralized and more interactive networks which help attitudes change and teachers grow in their use of the innovation.

All of the mechanisms of effective communication may be in place, but the existing organizational climate must be considered in planning for implementation. Supportive climates are characterized by a descriptive rather than an evaluative mode of operation, by a problem orientation rather than control, by spontaneity rather than superiority, and by provisionalism rather than certainty. Lasting change occurs more readily in a supportive climate than in a defensive climate. The characteristics of a supportive climate do not negate the importance of long term planning, but rather suggest that plans for communication must be flexible and constantly revised in response to the situations in which they are being utilized.

Communication Checklist

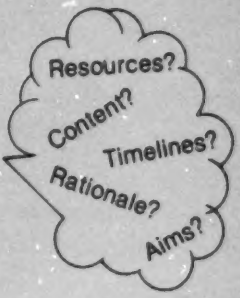
What networks are available?

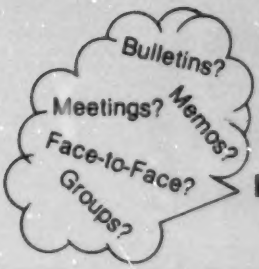




Who should be informed?

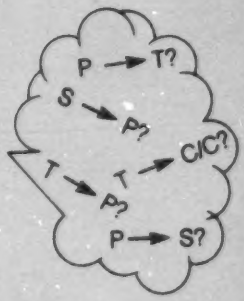
What should be communicated?





How should they be told?

How about feedback?



C – Role Identification

By definition, organizations are comprised of people working together to accomplish specific tasks. The successful and efficient completion of tasks is directly due to individuals fulfilling the tasks for which they are responsible. According to Table 7, each group of respondents identified the lack of role definition as a major barrier to effective implementation. It would seem that expectations are assumed without the assignment of specific responsibilities.

Schools and other public service agencies have special characteristics which make their operation somewhat different from that of many organizations. These characteristics include goal ambiguity, governance by political bodies outside the organization, methodologies that are minimally understood, and products which cannot easily be evaluated by quantified measures.

It is extremely important that people in schools know what responsibilities exist and to whom they belong. The roles of individuals in the larger school system must also be clear.

Role Assignment

The introduction of changes in organizations which have wide-ranging effects require individuals to assume new duties and to change their current methodologies in some manner. It is especially important that the exact nature of these changes be specified.

In planning for curriculum implementation, someone must assume responsibility for the identification and specification of the exact nature of the changes involved. Frequently the person responsible is a superintendent of curriculum, a subject consultant/co-ordinator, or in smaller jurisdictions, the director. The initiation of a role identification procedure should occur early in the awareness phase of the implementation effort. The following tasks should be performed:

1. Identifying the nature of the new curriculum in relation to the existing curriculum in terms of
   a) its philosophy,
   b) its expectations for teachers,
   c) its demand for resources.
2. Listing the type of decisions that have to be made about the use of the curriculum.
3. Determining the level in the organization at which each decision must be made.
4. Becoming familiar with the abilities and present roles of the people in the system who could and must be involved with the curriculum implementation process.
5. Establishing a reasonable timeline for task accomplishment.

6. Determining the availability of resources needed for each task at the appropriate time.
7. Assigning the tasks.

Task	Person(s) Responsible	Targeted Completion	Human and Physical Resources
1. Announce the introduction of the new curriculum	Director	Sept 5	Principal is meeting with personnel involved

Figure 5: Implementation Work Flow Chart

Feedback

A key to effective implementation is effective feedback. All persons involved in the process must know how and to whom feedback is given, must be guaranteed that their feedback is necessary for effective instruction, and must be actively solicited for their feedback. All persons involved in the implementation process should know exactly where to turn for information and resources. There are many possible ways to communicate this information and, if learning theorists are correct in their assessment that different people learn in different ways, as many means as possible should be utilized. In planning to communicate this information the following questions are useful:

1. Who would be interested in this curriculum change?
2. What types of questions might they have about the change?
3. Who could provide answers to these questions?
4. What means of communication are possible?

A matrix may be helpful in answering these questions (Figure 6).

Who Wants to Know	What Information	Who Has Information	How Could They Answer
Director	Why this curriculum is necessary What it will cost	Curriculum developer Consultant	Face-to-face briefly
Principal			
Teachers			
Parents			
Press			

Figure 6: An Implementation Information Matrix.

From the matrix, the curriculum manager should be able to plan to eliminate confusion relative to role, utilizing a variety of mechanisms including: special meetings, press releases, inservice training sessions, district bulletins, interclassroom visits, principal information exchanges, information update sheets, a "Here-is-who-to-ask" flyer and fact-finding activities.

Role Clarification

It is obvious that this planning must occur in the awareness phase of the implementation and that its management is best assumed by the consultant, co-ordinator or director responsible for the particular change. The involvement of principals and teachers in this stage of planning should enhance its effectiveness.

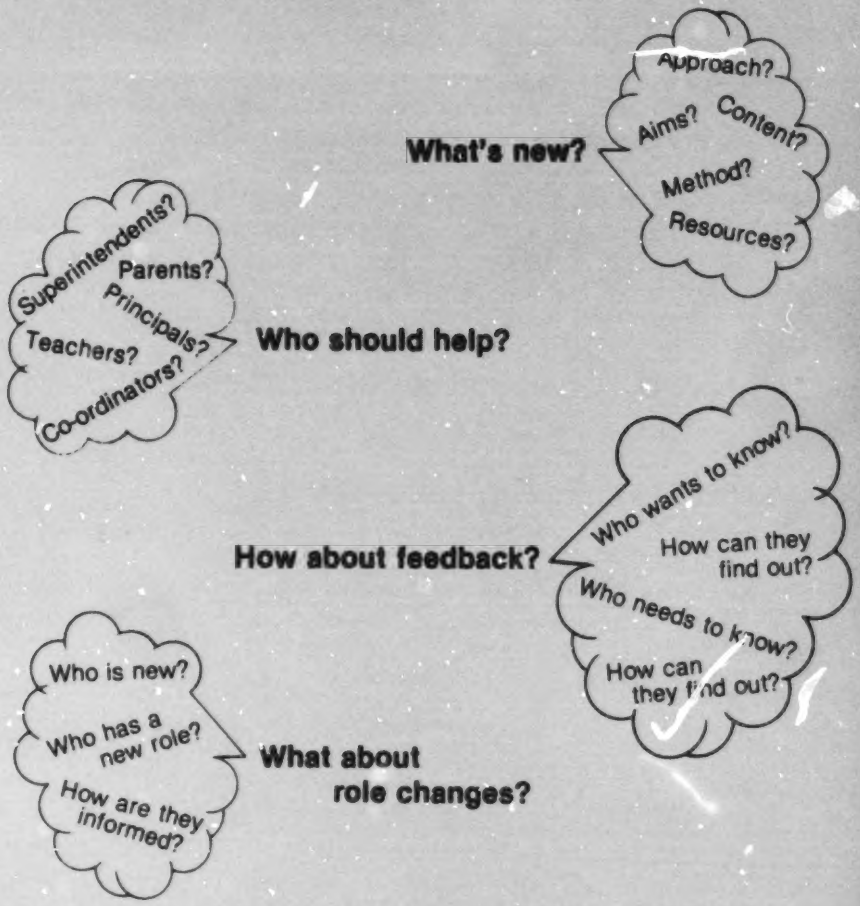
Principals have a responsibility for guaranteeing the clarity of roles in their schools and may find the strategies discussed of value. Their task during the latter stages of implementation becomes one of helping teachers contact the appropriate person for help with problems which may arise. Teachers, on the other hand, must assume responsibility for seeking assistance.

Role clarification is an ongoing process. As the implementation proceeds, duties and expectations change. Changes in personnel and reassignment of priorities make it imperative that changes be communicated to all involved. There is a tendency to assume that once an implementation effort is initiated, the people in the jurisdiction who are affected by the change are those who were there from its beginning. This is not necessarily the case, since new people may enter the system part way through the change and may feed information relative to roles at any time.

Summary

In summary, since the lack of role clarity has been identified as a barrier to the curriculum implementation process in Ontario schools, identifying the roles to be fulfilled is a necessary starting point in planning to overcome this barrier. This should be followed by anticipating the many questions and concerns which may arise and identifying the individuals responsible for the decision relative to these concerns. Preventive action can be taken by suggesting specific mechanisms for communicating role responsibilities. Role clarification must be viewed as a continuous process in which changes are made known to all persons involved including those persons in the system who were not there when the change was initiated.

Role Identification Checklist



D – Time

According to Table 7 two concerns emerge relative to the concept of time in the process of implementation. These are the provision of adequate time to plan for the implementation at all levels of the organization and the actual timing of the implementation effort in relation to other activities in the school jurisdiction. Time is a constant—it can neither be created nor destroyed, but it can be used effectively or it can be wasted.

Time Wasters

MacKenzie (1972), in a now classic description of time management, identified twelve major time wasters in organizations:

1. Lack of planning.
2. Lack of priorities.
3. Overcommitment.
4. Management by crisis.
5. Haste — too much in too little time.
6. Paperwork and reading that has not been properly screened.
7. Overemphasis on routine and trivia.
8. Socializing in the work situation.
9. Management by exception.
10. Poor leadership and overcommunication in meetings.
11. Indecision.
12. Lack of delegation.

It is easy to recognize the same time-wasters as barriers to implementation. Planning has been the major focus of this section of the report, but it should be recognized that a strategic plan at management level, while crucial to effective change, will not necessarily be suitable for individual teachers in the classroom or principals in schools already involved in major organization changes. Time must be provided for people at all levels to plan for curriculum implementation.

Time Strategies

Strategies frequently used include release time, professional activity days and special meetings for groups of people involved with the change. One method of helping teachers plan for implementation is to provide them with a carefully prepared guideline for examining the innovation. This might include training tapes and individualized learning packets related to the innovation which can be completed in the teacher's own time frame but still within time parameters established for the jurisdiction.

Similar packages with a differing emphasis would be helpful in familarizing principals with the innovation.

The significance of establishing a timeline with some built-in flexibility cannot be overstated. Nor can the need for constant progress checks against the timeline be over-emphasized. The implementation process must be a clear priority in the jurisdiction and must be made a clear priority for the principals and teachers involved. Clear communication of commitment, careful analysis of the changes actually required by the innovation, minutely planned meetings, decisive leadership and judicious delegation of responsibilities all serve to increase the probability of implementation and all serve to help individuals plan for their part in the process.

Time Scheduling

There is considerable evidence which suggests that the awareness phase of implementation should be allowed to occur slowly and that carefully detailed strategies in this phase of implementation will "pay off" in terms of more rapid early use and full use/renewal. This implies that there should be a "front-end loading" in the provision of time for implementation and that the curriculum manager should not be concerned if the early attempts to prepare people for change are not immediately successful. Instead, ample opportunities to reach individuals to help them prepare for the change may be more important than other strategies. There is a tendency to limit strategies in the early phases of implementation efforts to group situations. While group strategies cannot be eliminated, it is imperative that individuals receive the assistance they need to help them understand the nature and rationale of the change.

Time Awareness

Demonstrated support from upper level management is key to the several ways in which superintendents and directors can demonstrate their support for an innovation. The most obvious of these is by knowing what the innovation is, why it has been chosen, and why the choice is a good one. Armed with this knowledge base, the superintendent can be involved in the information released to the general public and to lower managerial levels in the jurisdiction. They can also talk with teachers in group situations and on a one-to-one basis about the innovation. Without the support of upper level management, principals and teachers cannot be expected to be very supportive of an innovation. In terms of time management, the superintendent can demonstrate the importance of the change by devoting a significant number of meetings and conversations to its promotion and by allowing principals and teachers the extra work time they need for meetings and training relative to the innovation.

Principals also have a significant role to play in assuring the success of implementation efforts. Their role must include a demonstrated willing-

ness to devote time for the planning of the implementation, to provide opportunities for staff members to discuss the innovation with co-workers as well as for training in the skills demanded of them.

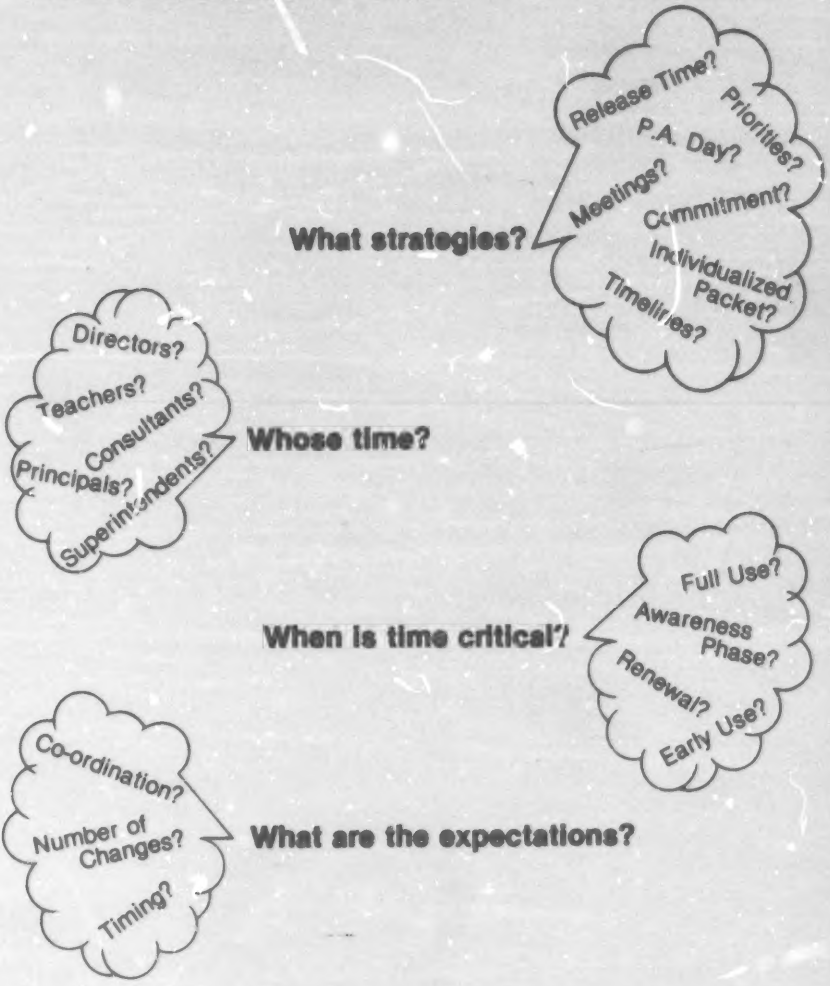
Time Expectations

The timing of implementation refers specifically to the placement of initiating activities for the adoption of the innovation. It relates not only to the calendar of events but also to the number of changes in which teachers, principals and consultants/co-ordinators are already involved. Historically, little conscious co-ordination of implementation efforts has occurred in educational jurisdictions. The result has been that many teachers and principals perceive that change is demanded of them much too frequently. Thus, innovations are shelved consciously or unconsciously by the potential users.

Summary

If curriculum changes are necessary, and if they are expected to occur, then they must be effectively planned, and this planning must be done on a megascale which identifies all the curriculum changes being demanded of teachers and which specifiies reasonable timelines for their occurrence. Researchers have concluded that the mean time needed for teachers to reach the full use/renewal phase of curriculum implementation ranges from five to eight years. In addition, research suggests that teachers and principals learn to implement effectively from positive experiences with implementation and, further, that the rate of implementation increases with successful implementation experiences. It seems reasonable, then, to suggest that curriculum implementation must be scheduled within the context in which it is occur.

Time Checklist



E – Resource Support

There are two basic categories of resources which must be considered in planning for curriculum implementation. Physical resources and human resources are perceived at each level of the system to be a barrier to effective implementation, according to Table 7. Physical resources include space, materials and finances for specific changes. Human resources consist of expertise and the time to provide assistance or carry out the duties associated with the implementation process. Housed within the human resources are the abilities of principals, teachers and consultants/co-ordinators to carry out the desired change.

Resource Planning

The awareness phase of the implementation process requires long term planning related to the provision of adequate resources. This planning can be carried out simultaneously with the planning for role clarification. In describing the innovation in terms of tasks and the resources needed to carry out those tasks, the planner has already identified the major resources required. The question then becomes whether or not the resources are available, and, if they are not, how they can be obtained or what substitutions are feasible without losing the essence of the intended change. Four distinct steps appear appropriate in planning at this stage:

1. The identification of the physical and human resources needed.
2. The identification of the physical and human resources available.
3. The identification of the discrepancies between the resources available and those needed.
4. The generation of the means to obtain the required resources.

The maintenance of an up-to-date inventory of physical resources in a jurisdiction, although time-consuming, is critical to effective management. This inventory should be readily available to those responsible for curriculum implementation, both on a school level and a jurisdictional level. The creation of such an inventory for a jurisdiction would normally be under the leadership of someone from central office, but it is the principal of each school who can and must know of relevant changes in resources within the school and within the district. The principal, in turn, relies on teachers for detailed information concerning the state of repair and usefulness of items in their classrooms.

Resource Support

Resource support is one of the more obvious areas in which the principal plays a major role in implementation. The primary information needed in order to plan for resource provision relates to the what and when of resource support. It is unrealistic to expect teachers to use a curriculum for which they are not equipped. The principal's role in resource provision would be made much simpler if those planning for implementation developed a list from which the principal could work in preparing the

teachers in each school for implementation. The format could be similar to that outlined in Figure 7.

RESOURCE	WHEN NEEDED	SCHOOL	TEACHER	STUDENT

Figure 7: Resource Checklist.

Accompanying any list of physical resources, there should also be a description of the human resources and specific teacher skills necessary for the new curriculum. Many changes in curricula require teachers to operate in a different fashion in their classroom, and it is in this matter that the principal plays a crucial role. Knowing the abilities and limitations of individual teachers enables the principal to identify potential difficulties and to help the teacher through these trouble spots or to find resource people who can help the individual teachers.

Resource Management

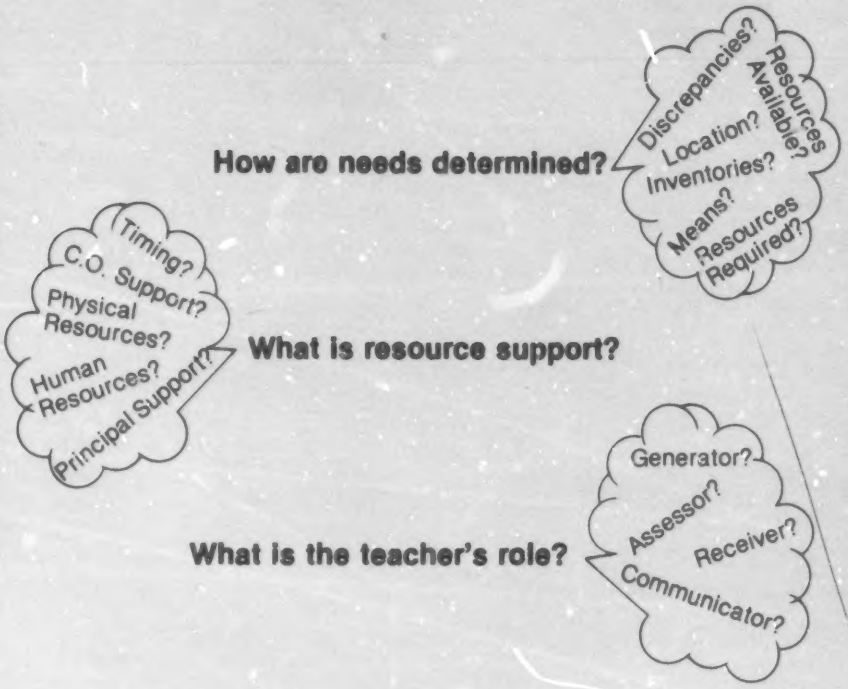
Teachers also have a responsibility in the area of resource management. Not only are they receivers but they are generators of resources. It is the classroom teachers who are in the best position to know how well a particular resource works in their own setting and it is the classroom teacher who is in the best position to keep other teachers, the principal and the consultant/co-ordinators informed of the strengths and weaknesses of both the physical and human resource support systems. Feedback can be fostered by providing opportunities for teachers to talk with each other relative to the implementation efforts, by principals and consultant/co-ordinators talking with teachers about their successes and failures with resources, by providing a forum such as a news bulletin in which suggestions for alternate resources and new uses of old resources can be reported or by a periodic formal quality checklist.

Summary

In summary, adequate provision of human and physical resources for the implementation of a curriculum depends largely on adequate preplanning. Careful resource assessment should be made at the awareness stage of implementation. This appraisal, while initiated by central office, will involve principals and teachers. As the implementation effort pro-

gresses, the onus of responsibility resides primarily with the school principal to be certain each school and teacher has the resources needed to utilize the curriculum effectively. During the early use and full use/renewal phases, teachers have the major responsibility of informing other teachers of the best use of resources, reporting modifications which are effective and of keeping the upper levels of administration informed.

Resource Support Checklist



F – Information

The information needed and wanted about a new curriculum varies from position to position and from person to person. According to Table 7, persons at all levels of the system perceived the lack of information to be a barrier to effective implementation. Three categories of information are relevant to this discussion: the nature of the curriculum guide, the nature of the teaching strategies needed to implement the guide, and the special qualities and implications of resources to be used with the guide.

Guideline Information

Several aspects of the nature of the guide are significant in the type of information sharing which is necessary in all phases of implementation. These include: the philosophy of the document; the constituent parts; its availability, practicality, clarity, relative advantage, compatibility with existing curricula, quality, communicability and cost; and its ability to be tried and observed, and to be flexible. Not all this information is important to all persons involved in implementation. Figure 8 provides one means of determining the information that is relevant to particular persons involved in the process.

Consultant/Co-ordinator	Principal	Teacher
Philosophy	Philosophy	Philosophy
Components		Components
Availability	Availability	
Practicality	Practicality	Practicality
Clarity		Clarity
Relative Advantage	Relative Advantage	Relative Advantage
Compatibility	Compatibility	
Trialableness		
Observableness	Observableness	
Flexibility	Flexibility	
Complexity	Complexity	
Quality	Quality	
Cost	Cost	Quality
Communicability	Cost	

Figure 8: Foci for Information About the Guideline.

Teaching Strategies

Several mechanisms are available for the transmission of this information. These include inservice sessions, face-to-face information exchange, goal-oriented packages of materials related to the guideline, discussion groups, videotaped informational presentations, field-testing situations; special bulletins, and the use of influential colleagues. There seems, how-

ever, to be a rational progression in the order in which the information is needed. The progression moves from the ideological to the practical with refinement in each area (Figure 9).

The reciprocal nature between practice and beliefs requires consideration, because people act in a manner consistent with what they believe. Changes in curriculum practice are dependent on the beliefs held by teachers, so that opportunities should be provided for an examination of the beliefs underlying the practice of the individuals as well as those underlying the proposed change.

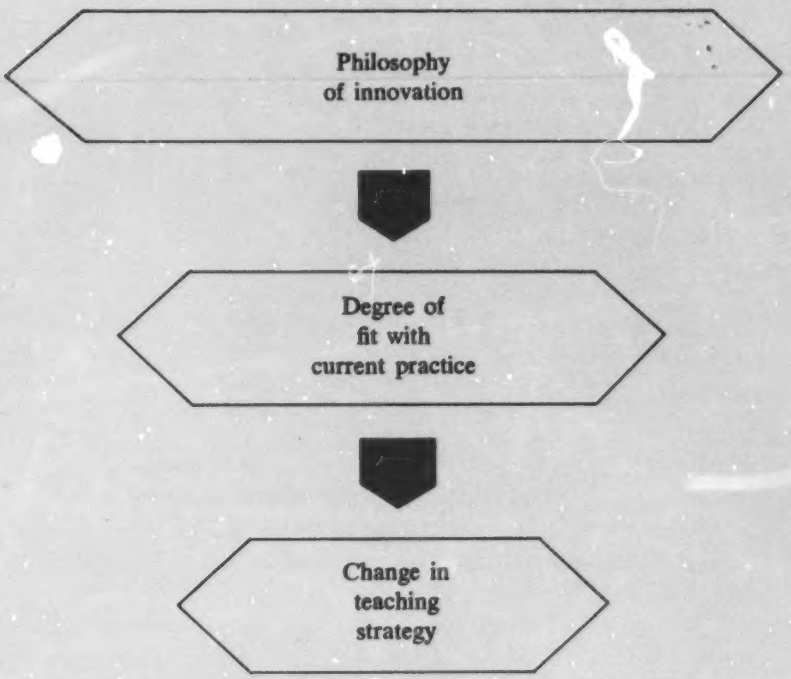
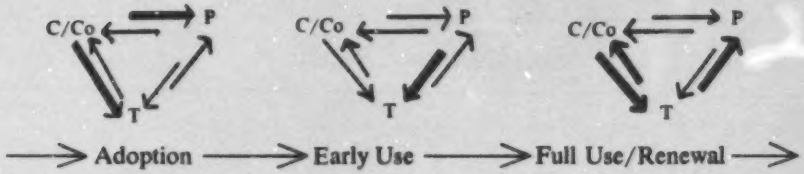


Figure 9: Progressive Focus for Presentation of Information Related to the Nature of the Guideline.

Although the consultant/co-ordinator must be knowledgeable in all areas relative to the guideline, the quantity of information in some areas required by principals and teachers is significantly different. During the

adoption phase of implementation, the major flow of information will probably be initiated by the consultant/co-ordinator in charge of the change. As the implementation process continues more and more of the information flow should emanate from the principals and then from the teachers. The relationships which exist among the people concerned dictate the types of information flow which are most effective (Figure 10).



(Thickness of the line indicates strength of flow.)

Figure 10: Flow of Information Throughout the Implementation Process.

Resource Information

Information most frequently needed regarding the manner of use of resources is chiefly related to operational aspects. The provision of resources is discussed in another section of this report, but to recap the type of information likely to be needed by consultant/co-ordinator, principals and teachers relates to specific techniques for resource utilization. In essence, the consultant/co-ordinator needs to know what the resources are, where they can be obtained, what their cost will be, how they should be used, what their durability is apt to be, what can go wrong with them, and how to repair them or get them repaired quickly. Principals also must be informed of the sources, cost, durability and repair of resources, but need not be as concerned with the actual techniques for the use of the resource. Teachers, on the other hand, must be provided with the opportunity to understand the practical applications of the resources and the means to repair them quickly.

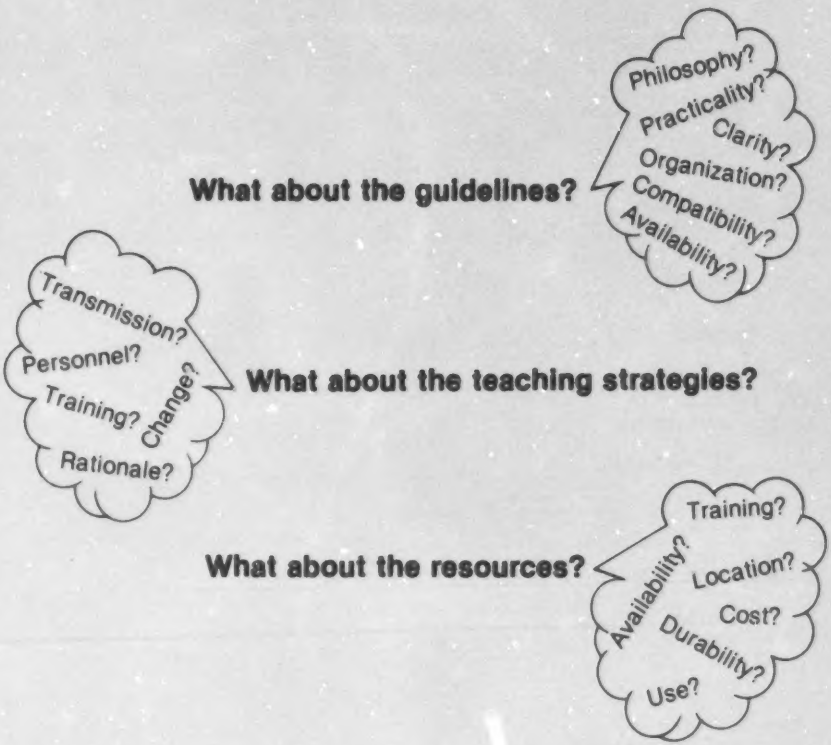
If the resource demands a high level of technical competence for its effective utilization, a variety of means of instruction should be considered. These strategies may include instructive brochures, audiovisual training packages, demonstrations, one-to-one training sessions, and practice sessions. A frequently used technique is that of training one or more individuals in a school to act as instructor in the use of the resource for other teachers. The presence of a teacher trained to instruct in specific techniques in each school provides a ready means for helping other teachers who become involved in teaching a new curriculum after the formal implementation period has elapsed. In a similar manner, videotapes and self-instruction packages related to the document are useful mechanisms for

the individualized professional growth of teachers. A major management problem with such packages is keeping teachers and principals aware that this assistance is available.

Summary

Throughout the three phases of implementation, two distinct changes related to information can be anticipated. The first involves the movement from the need for general information to the need for highly specific information. The second involves the target for information moving from virtually everyone in the jurisdiction to becoming teacher specific and very technically oriented.

Information Checklist



SECTION III

A – Case Study

The material presented in this section is meant to be viewed as an application of the principles outlined in the previous sections. The situation is hypothetical but represents implementation in practice in a school setting. As in the case of any study of this nature, opportunity is provided to work through the problem in an imaginary setting and to analyse and discuss alternative actions and their possible ramifications. Such activity not only reinforces but clarifies the suggestions and provides a springboard for action.

Suggestions for Use

This material could be used with principals, consultants/co-ordinators or teachers in a workshop setting. Each participant will require a copy of the case study found in this section, a copy of the model (Figure I) and a checklist for overcoming barriers to implementation.

In every situation, the case study must be read carefully by each participant. Then all or any of the following exercises are appropriate.

1. On the basis of the plan proposed by Mr. Firth, outline the specific strategies that relate to each block in the model.
2. Some blocks in the model will remain empty. Suggest possible strategies that could be included that would be appropriate for the empty cells. (Refer to the checklist provided).
3. Mr. Firth in a consultant/co-ordinator. What changes would you make in the plan for a principal?

In the case study which follows, a consultant/co-ordinator attempts to develop an implementation plan. Strategies are in place to overcome barriers. Concern is given to the actors at all educational levels. Implementation is viewed as a process that takes place over time. The suggested application of the model to the situation described in the case study provides an opportunity to review not only the components of the model but also the strategies proposed for overcoming barriers to implementation.

THE CASE STUDY

The Birchtree School Board recognized the need for a new language arts curriculum for students in kindergarten through grade three. Two major factors contributed to the decision to search for an alternative to the programme in use: much discontent among teachers relative to the curriculum materials and a vocal parent group, led by a former language arts consultant. This group had made formal presentations to the board relative to the inadequacies of the programme, had written letters to the local newspaper, and had presented its case on a local open-line radio programme to help build pressure for change.

Recognizing the need to take immediate action, the board readily approved the establishment of a special curriculum committee to recommend a new guideline for use in the school board. Due to a lack of expertise in curriculum development in the board, reduced fiscal resource and the need for immediate reaction to the problem, the committee was directed to select a guideline from among those which existed in another jurisdiction in the province.

Mr. Firth, the language arts consultant, was placed in charge of the selection committee, with the direction that he was to report the committee's recommendation to the board in two months. The limited time available meant that immediate action was necessary, so Mr. Firth initiated the collection of curriculum guidelines by phoning language arts consultants in other jurisdictions requesting copies of their K-3 programmes. He then selected his committee with representatives from each elementary school in the board. He knew that the resultant committee would be large, but felt that it would help to make other concerned teachers aware that action was being taken.

The complaints that teachers had relative to the current language arts curriculum were vague but similar. It seemed obvious that if the new curriculum was to overcome these concerns, some specification and clarification was necessary. He decided to suggest to his committee that part of the task would include the compilation of a list of specific concerns about the existing curriculum. In fact, at the first committee meeting which would be a full day meeting, there would be three major objectives: to give the committee the opportunity to establish a working relationship, to identify the means to determine the major problems with the present curriculum, and to initiate the procedures for assessing the curricula from other jurisdictions.

The committee's first meeting progressed well. Not everyone was as enthusiastic or as concerned as Mr. Firth would have liked them to be, but there was an overriding sense of commitment to the project. Actually, the committee had managed to develop a strategy for the identification of the major problems with the present curriculum. Each committee member was to meet with grade-level teachers in each school and provide the informa-

tion gathered there to Miss Fitzgerald, a committee member who agreed to compile a composite list before the next committee meeting. In addition, they outlined some major questions to act as the basis for their analysis of the curricula from other jurisdictions. They concluded that the actual checklist could not be completed before information regarding the specific problems with the existing guideline was available. Areas of major concern included specific content, teaching strategies suggested, resources required, format of the guideline and the basic philosophy of the document.

The committee worked consistently throughout the two-month period. Its choice of the Language Arts Skill Training (LAST) guideline was not a unanimous one, but it did appear to be the most reasonable in light of the fact that it clearly addressed many of the major complaints teachers had with the curriculum they were using.

The board approved the committee's recommendation to adopt LAST and placed Mr. Firth in charge of the implementation process. Being an enlightened board, most trustees realized that there was little chance that the new curriculum would be used extensively in the schools during the school year which was to start in four months, but they were anxious that it be in classrooms as quickly as possible and that the public, especially the vocal parent group, be informed of the forthcoming change. In formulating a plan for implementation, Mr. Firth recognized the need to determine a reasonable sequence of events. He realized that teachers might not be as ready to change their classroom behaviour as they were to complain about the existing curriculum, but he knew he had to start somewhere. The following sequence is what appeared on his early planning sheet:

Year 1

May 15: Principal's monthly meeting.

a) A 15-minute presentation regarding the philosophy of the new curriculum.
b) An information flyer for all teachers in the board announcing adoption of the new curriculum, identifying the names of the committee members involved with its selection, and highlighting some features of the programme (to be delivered by principals).
c) A short "blurb" for inclusion in the next information bulletin to be sent by the school to parents in the district.

May 25: Special meeting with principals of primary schools and the selection committee.

a) "Walk-through" the guideline.
b) Identify the specific types of changes necessary (teaching strategies and resources in particular).
c) Focus on the advantages of the new programme and differences from the old.
d) Identify specific concerns of principals at that time.

May 28 - June 5: Meetings with primary teachers in each school.

a) "Walk-through" K-3 LAST.
b) Focus on philosophy.
c) Identify similarities and differences between LAST and curriculum being used.
d) Leave appropriate document for each grade with teachers for perusal before inservice sessions.

June 14: District teachers' meeting.

a) Director to include comments in support of the new curriculum in address to teachers.
b) Special press release re LAST.

June 18-22: Visit individual schools to talk with individual teachers about LAST.

a) Identify major concerns.
b) Assess teaching strategy training needs.
c) Meet with principal regarding resources available/needed.

August 29: Special LAST committee meeting.

a) Train committee members as inservice leaders about the philosophy of LAST.
b) Review the major features and discrepancies.

September 4: Inservice afternoon with K teachers about LAST.

a) Work regarding clarification of philosophical assumptions inherent in LAST and their implications for practice.
b) Have teachers commit themselves to field-test specific portions of the K-LAST.

October 4, Nov. 1, Dec. 6: Skill training sessions for K Teachers.

a) Focus on specific group skills.
b) Assess how field-tests are going.
c) Establish task forces as necessary to problem-solving.

Year 2

February 3: Workshop with Grade 1 teachers.

a) Philosophy.
b) Walk-through.
c) Teaching strategies.

March: Combined K-1 meeting.

a) K teachers describe what they are doing and how it is going.
b) Focus on link.
c) Check with principals about resources.
(Be sure trainers are available.)

September-June 3: Plan for early training of grade teachers.

Phase-in Grade 2 in similar manner through Year 3 and Grade 3 in the fourth year.

C – Curriculum Implementation Checklist

The following checklist highlights the major points presented in previous sections of the booklet. More information can be found in the text of the booklet as well as the conclusion of each unit. This checklist can be utilized to develop a comprehensive plan for implementation of specific curriculum guidelines.

Communication

1. Alternate communication networks have been considered. _____
2. All personnel requiring information have been identified. _____
3. The appropriate information has been matched with the appropriate people. _____
4. A variety of methods have been selected to communicate the message. _____
5. Feedback mechanisms have been selected. _____

Role Identification

6. Curriculum changes have been identified. _____
7. Role changes have been considered. _____
8. Personnel have been informed. _____

Time

9. A variety of time arrangements have been considered. _____
10. Time demands for various personnel have been outlined. _____
11. Critical time periods have been identified. _____
12. Timelines have been established. _____

Resource Support

13. Resource needs have been identified. _____
14. Sources of resource support have been identified. _____
15. The role of the teacher relative to resources has been identified. _____

Information

16. The guideline expectations have been considered. _____
17. The teaching strategies have been identified. _____
18. The required resources have been considered. _____

D – Conclusion

Curriculum implementation does not happen automatically once a document is adopted for use. It is a process that necessitates careful planning involving people at all educational levels over an extended period of time. Careful planning involves establishing strategies for overcoming the potential barriers to implementation identified in this study. The major actors in the implementation process are teachers, principals and consultants/co-ordinators — people who have a stake in the enterprise. The process goes through several phases from the point of adoption to the point of successful implementation. These phases have been labelled awareness, early use and full use/renewal. The model proposed in Figure I, Section II, reveals the interaction among these elements and provides a grid for the development of an implementation plan and for the assessment of the plan once it is developed and in operation.

The major emphasis in this section has been on the areas of concern or barriers. The checklist provided in relation to each barrier suggests questions which should be answered in the planning process. The answers to these questions become, in fact, an integral component of the particular plan for curriculum implementation.

These barriers are evident at all educational levels and at all stages in the implementation process. Therefore, each barrier must be addressed in terms of the actors and of the process phase. It is obvious that some blocks in the grid will demand more attention than others. Wise implementers will, however, address each block in their planning and assess the plan by making reference to all cells within the model.

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